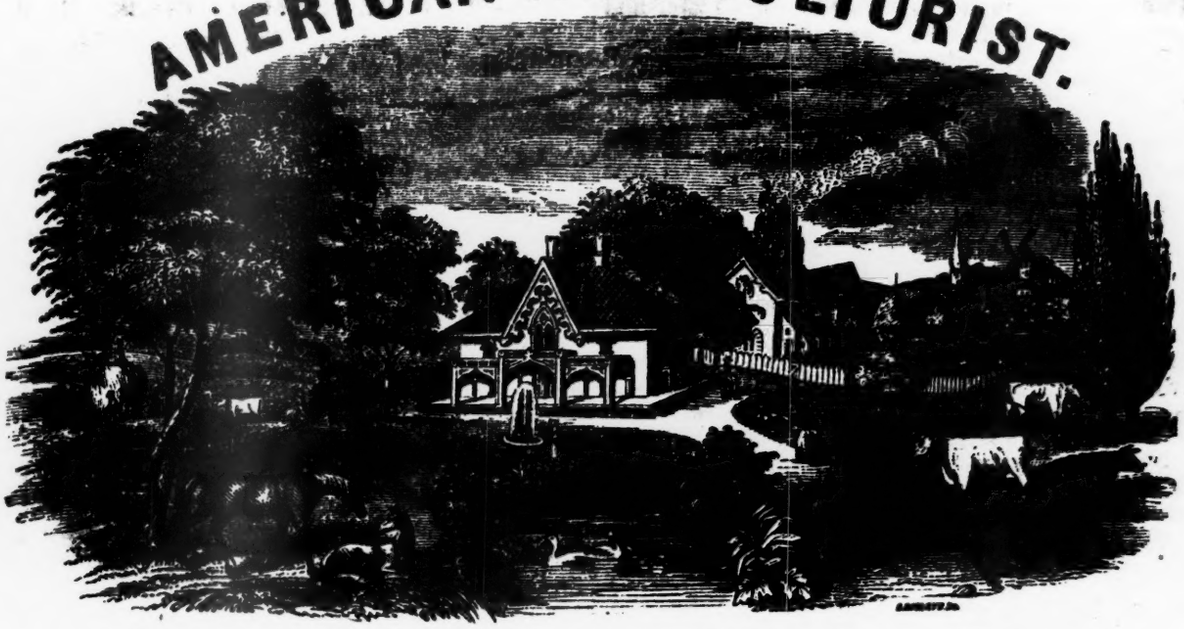
AMERICAN AGRICULTURIST.



Agriculture is the most healthy, the most useful, and the most noble employment of man.—WASHINGTON.

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A. B. ALLEN, Editor. C. M. SAXTON, Publisher, 205 Broadway.

CULTIVATION OF MELONS.

THERE are many varieties of the melon (*Cucumis melo*), of which the best may be considered as "Skillman's Netted," the "Green-fleshed Citron," the "Green-fleshed Nutmeg," the "Large Yellow Cantaloup," the "Green-fleshed Persian," the "Musk-scented," and the "Pineapple." Of these, the first three are generally cultivated throughout the United States, and abound in our markets for at least three months in the year. It is already known to many of our readers that this city is greatly indebted for this luxury to several families by the name of Bergen, who annually cultivate some hundred acres, near Gowanus, Long Island, and at Shrewsbury, New Jersey. Although not a sure crop, we have been informed that an acre of their land, well tilled, will yield from $100 to $400 worth of melons in a season.

The soil best suited for the melon, in open culture, is a light, sandy loam, similar to that of the southerly end of Long Island and the adjacent shores of New Jersey. The ground should be plowed or spaded, from 12 to 18 inches deep, and well pulverized with a harrow or rake. The proper season for sowing is at the time the peach tree is in bloom; for, if planted earlier, there would be fear of their being cut off by frosts. The seeds may be sown in broad hills, 18 inches in diameter, and 5 feet apart from centre to centre, each supplied with a shovelful of well-rotted stable, or barn-yard manure. In order to guard against accidents, at least 20 seeds should be scattered in a hill, which should be covered with finely-pulverized earth at about the same depth as in planting Indian corn.

Soon after the plants are up, and begin to show their second leaves, they may be weeded with a hoe, and a portion of them thinned out, still leaving enough to guard against accidents or the depredation of worms. In the course of the summer, before the vines begin to spread, two furrows should be run between the rows, with a cultivator or plow, turning the earth directly *from* the plants, which should again be freed of weeds, and reduced in number to five or six in each hill. A few weeks later, a second plowing should take place, turning the earth *towards* the vines, when a broad, flat hill should be formed, slightly hollowing in the middle, so as to receive and retain the water supplied by irrigation or from the fall of rains. After this, no further attention will be required, except in keeping down the weeds, and in guarding against worms.

NOTES ON LONG ISLAND.—No. 2.

WE shall not soon forget the sultry day we made an excursion from Oyster Bay to Glen Cove. Accompanied by Mr. D. K. Youngs, and Mr. Wm. S. McCoun, each of whom contributed a fast-trotting nag, to make up the carriage pair, we drove along the fine gravel roads of this part of the island, at a pace fast enough to gratify the most impatient of locomotives. What most interested us in this day's excursion, was a visit at Dosoris, the residence of the late General Nathaniel Coles, the breeder of American Eclipse. The stall where this famous race horse first saw the light, is one of a row in quite an ordinary stable, on West Island, which is a part of the farm. It is a pretty spot, indeed; washed by the sound, shaded by scattering trees, and abounding with excellent pasturage. The soil is a compact, gravelly loam. It is just the place for a wild colt to play his pranks; and after witnessing these for a season, General Coles made up his mind that he had at last got a trump, and hence his name, after one of the most famous horses that England ever produced.

Eclipse was by Duroc, out of Miller's Damsel, and was foaled, May 25th, 1814. No horse in

America ever attained anything like his fame, and perhaps never will. This was owing in a measure to the great sectional race between the north and the south, which he ran with Sir Henry, over the Union Course, on Long Island, on Tuesday, the 27th of May, 1823, Eclipse beating him in the two last heats, and thus winning very easily. It was supposed that upwards of sixty thousand persons were present on this occasion. The race was a subject of great interest throughout the United States for some time before and after the event. Certain sections were as much, or perhaps more excited by it, than they would have been by a presidential contest. In fact, immediately after it was over, the late eccentric John Randolph, of Roanoke, remarked, that he was very glad the next president was not to be chosen by the people on that day, for if he were, Mr. Purdy, the fortunate rider of Eclipse, would certainly have been the man.

After this match, Eclipse was put into the breeding stud, where he proved as good a stock getter as he had been a racer. He stood in this vicinity several years, and was then purchased by Col. Johnson, and taken to Virginia, Tennessee, and Kentucky. He died of an apoplectic fit, on the farm of Mr. Jilson Yates, near Shelbyville, Kentucky, on the 11th of July, 1847, in his thirty-fourth year. He was a clean-limbed, powerful-built horse, of great speed and endurance. He had a plain head and neck, but was unmatched in the exquisite beauty and fine proportions of all his other points. He stood fifteen and a half hands high, and was of a light chestnut, or sorrel color. Up to within a few days of his death he was as spirited and lively as a colt, and did not appear to be over ten years old.

The following quaint eulogy of Eclipse, appeared soon after his death, in the "Pine Knot," a paper published at Napoleon, Mississippi :—

Farewell, old horse! thy race is run;
The final goal at length is won;
This to thy praise at least be said—
Thou never wast, as some are, led;
No servile follower for bread.
Thou wast a leader "from the start,"
And well hast acted here thy part;
Well may thy friends, and truly, boast,
First wast thou ever at thy "post;"
Sure of "the right"—then like a rocket,
Your shot "AHEAD"—like Davy Crocket.
Our eyes with mourning tears run o'er,
Alas! that thou canst run no more!
We loved thee living, mourn thee dead!
"Green be the *turf* above thy head!"

For a highly interesting and particular account of the great race between Eclipse and Sir Henry, see page 76, of this number of the Agriculturist.

WASH FOR FRUIT TREES.—Take equal parts, by measure, of ground plaster of Paris, soft soap, and green cow dung; dilute them with water to the consistency of common white wash; and apply the mixture to the trunks and large branches of the trees with a mop or brush. This will not only have a tendency to destroy or ward off insects, but render the trees more healthy and fruitful.

SALTING MANURE.—Mixing salt with stable and other manures has a great tendency to prevent the development of grubs and vermin, which are frequently bred in dung when carried unsalted to the fields.

AGRICULTURE OF THE CHINESE.—No. 3.

Terrace Cultivation.—The terrace cultivation of China has been noticed by nearly all writers upon that country, and, like most other subjects, it has been either much exaggerated or undervalued. It appeared to me to be carried to the greatest perfection on the hill sides adjacent to the river Min near Foo-chow-foo; at least I was more struck with it there thany anywhere else. On sailing up that beautiful river, these terraces look like steps on the sides of the mountains, one rising above another, until they sometimes reach six or eight hundred feet above the level of the sea. When the rice and other crops are young, these terraces are clothed in luxuriant green, and look like a collection of gardens among the rugged and barren mountains. The terrace system is adopted by the Chinese, either for the purpose of supplying the hill sides with water where paddy is to be grown, or to prevent the heavy rains from washing down the loose soil from the roots of their vegetables. Hence these cuttings are seen all over the sides of the hills, not exactly level like the rice terraces, but level enough to answer the purpose of checking the rains in their descent down the mountain. For the same reason, the sweet potato and some other crops, which are grown on the hills, are always planted in ridges which run crosswise or horizontally; indeed, were the ridges made in a different direction, the heavy rains which fall in the early summer months would carry both the loose soil and crops down into the plains.

Rice is grown on the lower terrace ground, and a stream of water is always led from some ravine and made to flow across the sides of the hills, until it reaches the highest terrace, into which it flows and floods the whole of the level space. When the water rises three or four inches in height, which is sufficiently high for the rice, it finds vent at an opening made for the purpose in the bank, through which it flows into the terrace below, which it floods in the same manner, and so on to the lowest. In this way the whole of the rice terraces are kept continually flooded, until the stalks of the crops assume a yellow ripening hue, when the water being no longer required, it is turned back into its natural channel, or led to a different part of the hill, for the nourishment of other crops. These mountain streams, which abound in all parts of the hilly districts, are of the greatest importance to the farmer; and as they generally spring from a high elevation in the ravines, they can be conducted at pleasure over all the lower parts of the hills. No operation in agriculture gives him and his laborers more pleasure than leading these streams of water from one place to an other and making them subservient to their purposes. In my travels in the country the inhabitants often called my attention to this branch of their operations, and I pleased them much when I expressed my admiration at the skill with which they executed it. The practice is not confined to the paddy fields; for I remember once, when superintending the planting of some large trees and shrubs in the garden of Messrs. Dent & Co., in Hong-kong, after I had given them a large supply of water at the time they were put into the ground, I desired the gardener to repeat the dose next morning. But, on the following day, when I returned

to the spot I was surprised to find a little stream divided into many branches, and meandering amongst the roots of the newly-planted trees. As there was no stream there before, I went up to examine its source, and found that it had been led from a neighboring ravine; a work more easy than carrying a large supply of water in buckets, and at the same time more effectual.

APPLE ORCHARDS.—No. 7.

Attack from Borers.—The apple-tree, as well as the quince, mountain ash, June berry, and various species of thorns and aronias, are attacked by the larvæ of the two-striped saperda (*Saperda bivittata*, Say), denoted by the adjoining figure. The upper side of the body of the perfect insect is marked with two longitudinal white stripes between three others of a light-brown color, while the face, the antennæ, the under side of the body, and the legs, are white. This beetle varies in length from a little more than one half to three fourths of an inch. It comes forth from the trunks of the trees early in June, making its escape in the night, during which time only it uses its ample wings in passing from one tree to another in search of companions and for food. In the daytime, it keeps at rest among the leaves of the plants on which it feeds. In the months of June and July, the females deposit their eggs upon the bark of the trees, near the roots, and the larvæ, or borers, hatched from them, consist of fleshy whitish grubs, without legs, nearly cylindrical in their form, and tapering a little from the first ring to the end of the body. The head is small, horny, and of a brownish color. The first ring is much larger than the others, the next two very short, and, like the first, are covered with punctures and very minute hairs. This grub, with its strong jaws, cuts a cylindrical passage through the bark, and pushes its castings backwards out of the hole, while it bores upwards into the wood. It continues in the larva state two or three years, during which it penetrates eight or ten inches into the trunk of the tree, its burrow at the end approaching to, and being covered only by, the bark. It is in this situation that its transformation takes place, which is completed about the first of June, when the beetle gnaws through the bark that covers the end of the burrow, and comes out of its place of confinement in the night. One of the oldest, safest, and most successful modes of destroying this borer is, to thrust a wire into the hole it has made; or, what would probably answer as well, to plug it up with soft wood.

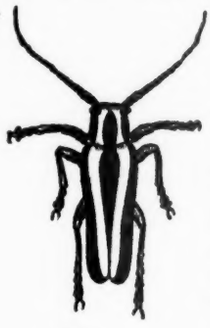


FIG. 16.

Attacks from Coccidæ, or Bark Lice.—Young apple trees, and the extremities of the limbs of older trees, are very much subject to the attacks of a small species of bark louse (*Coccus* * * * * * ?) The limbs and smooth parts of the trunks are sometimes completely covered with these insects. They measure about one tenth of an inch in length, are of an oblong-oval shape, gradually decreasing to a point at one end, and are of a brownish color, very near to that of the bark of the tree. There is also another species of coccus, which inhabits the apple tree, differing from the one above mentioned in several important particulars. It is one of the kind in which the body of the female is not large enough to cover her eggs, for the protection whereof provision is made, consisting, in this species, of a kind of membraneous shell, of the color and consistence almost of paper. In autumn, and during winter, these insects are seen in a torpid state, and of two different forms and sizes, on the bark of the trees. The larger ones measure less than a tenth of an inch in length, and are in the shape of a common oyster shell, being broad at the hinder extremity, but tapering towards the other, which is surmounted by a little oval, brownish scale. The small ones, which are not much more than half the length of the others, are of an oblong-oval shape, or almost four-sided, with the ends rounded, and one extremity is covered by a dark-colored, minute, oval scale.

On examining the trees early in the spring, the females may be found, in a lifeless state, fastened close to the bark, having been fixed in this position ever since the year before. A little later in the season, their bodies become more distended, and on carefully removing them, numerous eggs will be found beneath them. At this period, the internal parts of their bodies appear to be dried up and dead, their outer skins only remaining, which serve as shields for protecting their future progeny. On the approach of the heats of summer, the larvæ are hatched, and escape at the lower extremities of the shields, which are slightly elevated or notched at these parts. In this stage of their existence, they usually have the appearance of small, oval, roundish, or oblong scales, of a brownish color, and much in the shape of their parent shields, but thinner, more flattened, and of a paler color. At first, they are full of activity, disperse themselves over the young shoots and leaves, puncture the tender parts, exhaust the sap by suction, and increase in size, till they prepare for change. In the early period of their growth, their heads are completely concealed beneath the shells of their bodies; their beaks or suckers appear to proceed from their breasts; and their legs, which are six in number, are so short that they are not visible from above. When they have completed the larva state, they prepare for transformation by emitting from the under sides of their bodies, numerous little downy threads, by which they securely confine themselves to the bark. After becoming thus fixed, they remain, for a time, in a torpid state, and under these inanimate scales, the transformations of both sexes take place. The outer coverings of the males serve as cocoons, from which they appear to shrink and become detached. In the course of time, they push themselves out of their shells, at the little fissures at their extremities, and appear in their perfect form, having two wings, which lie flatly upon their bodies, but no beaks, as they had previous to their transformation. In a few days after the females fasten themselves to the bark, they contrive to burst, and throw off, in flakes, their outer coats, and betake similar forms as those which they before assumed, and enter into the pupa or chrysalis state. When mature, they retain their beaks or suckers, and are wingless, but are destined never to change their places after they have once become fixed. In this condition, their bodies are

greatly enlarged, and in some species, approach more or less to a spherical form. It is in this condition that they receive the embraces of the males, after which, they continue to increase in size for a time, eject their eggs, and gradually shrink away, leaving nothing but their dry, outer skins, and perish on the spot. After the eggs mature, they imperceptibly pass under the body of their mother, where they remain, until they undergo the changes before described. *

RACE BETWEEN ECLIPSE AND SIR HENRY.

THE following is the best account which we have met with of the great sectional race, between the north and the south, run by Eclipse and Sir Henry, on the Union Course, Long Island, New York, in May, 1823, and alluded to on page 74, of this number of our journal. It was written by the late Cadwallader R. Colden, and appeared in the American Turf Register, for September, 1830. Presuming that many of our readers will be gratified by its perusal, we take this opportunity of transferring it to our columns.

First Heat.—At length the hour appointed arrived; the word was given to saddle, and immediately afterwards to mount. Eclipse was rode by William Crafts, dressed in a crimson jacket and cap, and Sir Henry by a Virginia boy, of the name of John Walden, dressed in a sky-blue jacket with cap of the same color. The custom on the Union Course, is to run to the left about, or with the left hand next to the poles. Eclipse, by lot, had the left or inside station at the start. Sir Henry took his ground about twenty-five feet wide of him, to the right, with the evident intention of making a run in a straight line for the lead. The preconcerted signal was a single tap of the drum. All was now breathless anxiety; the horses came up evenly; the eventful signal was heard; they went off handsomely together. Henry apparently quickest, made play from the score, obtained the lead, and then took to a hard pull. By the time they had gone the first quarter of a mile, which brought them round the first turn, to the commencement of what is termed the back side of the course, which is a straight run, comprising the second quarter of a mile, he was full three lengths ahead; this distance he maintained, with little variation running steadily, with a hard pull, during the first, second, third, and for about three fourths of the fourth round, or mile, the pace, all this time, a killing one. It may be proper to note that the course is nearly an oval, of one mile, with this small variation, that the back and front are straight lines of about a quarter of a mile each. When the horses were going the last round, being myself well mounted, I took my station at the commencement of the stretch, or last quarter, where I expected a violent exertion would be made at this last straight run in, when they left the straight part on the back of the course, and entered upon the last turn. Henry was, as heretofore, not less than three lengths in the clear, ahead. They had not proceeded more than twenty rods upon the first part of the sweep, when Eclipse made play; when they were at the extreme point or centre of the sweep, I observed the right hand of Crafts disengaged from his bridle, making free use of his whip; when they had swept about three fourths of the way round the turn, and had advanced within twenty-five rods of my station, I clearly saw that Crafts was making every exertion with both spur and whip to get Eclipse forward. At this moment, Eclipse threw his tail into the air, and flirted it up and down, after the manner of a tired horse, or one in distress and great pain; and John Buckley, the jockey (and present trainer), who I kept stationed by my side, observed, "Eclipse is done." When they passed me about the commencement of the stretch, seventy or eighty rods from home, the space between them was about sixteen feet, or a full length and a half in the clear. Here the rider of Henry turned his head round and took a view for an instant of his adversary. Walden used neither whip nor spur, but maintained a hard and steady pull, under which his horse appeared accustomed to run. Crafts continued to make free use of the whip; his right hand in so doing was necessarily disengaged from the bridle, his arm often raised high in air, his body thrown abroad, and his seat loose and unsteady; not having strength to hold and gather his horse with one hand, and at the same time keep his proper position. In order to acquire a greater purchase, he had thrown his body quite back to the cantle of the saddle, stuck his feet forward by way of bracing himself with the aid of the stirrups, and in this style, he was belaboring his horse, going in the last quarter. Buckley exclaimed (and well he might), "only look at Billy" [meaning Crafts, the rider of Eclipse, for the first heat]. From this place to the winning post, Eclipse gained but a few feet, Henry coming in ahead about a length in the clear. The shortest time of this heat, as returned by the judges on the stand, was 7 minutes 37½ seconds.

I pushed immediately up to the winning post, in order to view the situation of the respective horses, after this very trying and severe heat; for it was in fact running the whole four miles. Sir Henry was less distressed than I expected to find him. Eclipse also bore it well, but of the two, he appeared the most jaded; the injudicious manner in which he had been rode, had certainly annoyed and unnecessarily distressed him.

The incapacity of Crafts to manage Eclipse (who required much urging, and at the same time to be pulled hard), was apparent to all—he being a slender-made lad, in body weight about 100 lbs., only. A person interested in the event, seeing Buckley, who had rode the horse on a former occasion, with me, requested that I would keep him within call, and ready to ride in case of emergency. It was, however, soon settled, and announced that Mr. Purdy would ride him the second heat, upon which long faces grew shorter, and northern hopes revived. Six to four was, nevertheless, offered on the southern horse, but no takers.

Second Heat.—The horses, after a lapse of 30 minutes, were called up for a second heat. I attentively viewed Eclipse while saddling, and was surprised to find that to appearance he had not only entirely recovered, but seemed full of mettle, lashing and reaching out with his hind feet, anxious and impatient to renew the contest. Mr. Purdy having mounted his favorite, was perfectly at home, and self-confident. The signal being again given,

* See Harris' Report pp, 90, 201 et 203.

he went off rapidly from the start. Sir Henry being now entitled to the inside, took the track, and kept the lead, followed closely by Eclipse, whom Mr. Purdy at once brought to his work, knowing that game and stoutness was his play, and his only chance of success, that of driving his adversary up to the top of his rate, without giving him the least respite. Henry went steadily on, nearly at the top of his speed, keeping a gap open between himself and Eclipse of about 20 feet, without much variation, for about two miles and seven eights, or until towards the conclusion of the third mile, they had arrived nearly opposite the four-mile-distance post. Here Purdy made his run, and when they had advanced forty rods further, which brought them to the end of the third mile, was close up, say nose and tail. They now entered upon the fourth and last mile, which commences with a turn or sweep, the moment you leave the starting post. Here the crowd was immense. I was at this moment on horseback, stationed down the stretch or straight run, a short distance below the winning post, in company with a friend and Buckley, the jockey, who kept close to me during the whole race. We pushed out into the centre, or open space of the ground, in order to obtain a more distinct view of the struggle, which we saw making for the lead; everything depended upon the effort of Purdy; well he knew it; his case was a desperate one, and required a desperate attempt; it was to risk all for all; he did not hesitate. When the horses had got about one third of the way round the sweep, they had so far cleared the crowd as to afford us a distinct view of them before they reached the centre of the turn. Eclipse lapped Henry about a head and girth, and appeared evidently in the act of passing. Here Buckley vociferated, "See Eclipse! Look at Purdy! By heaven, on the inside!" I was all attention. Purdy was on the left hand or inside of Henry. I felt alarmed for the consequence, satisfied that he had thus hazarded all. I feared that Walden would take advantage of his position, and by reining in, force him against or inside one of the poles. When they had proceeded a little more than half way round the sweep, the horses were a dead lap; when about three fourths round, Eclipse's quarter covered Henry's head and neck, and just as they had finished the bend, and were entering upon the straight run, which extends along the back part of the course, Eclipse, for the first time, was fairly clear, and ahead! He now with the help of the persuaders, which were freely bestowed, kept up his run, and continued gradually, though slowly, to gain during the remaining three quarters of a mile, and came in about two lengths ahead As they passed up the stretch, or last quarter of a mile, the shouting, clapping of hands, waving of handkerchiefs, long and loud applause sent forth by the Eclipse party, exceeded all description; it seemed to roll along the track as the horses advanced, resembling the loud and reiterated shout of contending armies. Time, this second heat, 7m. 49s.

Third Heat.—It was now given out, that in place of the boy Walden, who had rode Sir Henry the two proceeding heats, that Arthur Taylor, a trainer of great experience, and long a rider, equalled by few, and surpassed by none, would ride him this last and decisive heat. At the expiration of 30 minutes the horses were once more summoned to the starting post, with Purdy and Taylor mounted; the word being given, they went off at a quick rate. Purdy now taking the lead, and pushing Eclipse from the score; evidently resolved to give Sir Henry no respite, but to cause him, if determined to trail, to employ all his speed and strength, without keeping anything in reserve for the run in. Sir Henry continued to trail, apparently under a pull, never attempting to come up until they had both fairly entered the straight run towards the termination of the last mile, and had advanced within sixty rods of home. Here Sir Henry being about five yards behind, made a dash, and ran up to Eclipse, so far as to cover his quarter or haunch with his head, and for a moment had the appearance of going past; he made a severe struggle for about two hundred yards, when he again fell in the rear, and gave up the contest.

Thus terminated the most interesting race ever run in the United States. Besides the original stakes of $20,000 each, it was judged that upwards of $200,000, changed hands.

In this last heat, Sir Henry carried 110 lbs, being two pounds over his proper weight; it not being possible to bring Arthur Taylor to ride less, and although a small horse, and wanting twenty days of being four years old, he made the greatest run ever witnessed in America. Time, this heat, 8m. 24s.

Thus the three heats, or twelve miles, were run in 23 minutes, 50½ seconds, or an average of 7 minutes 57 seconds each heat; or 1 minute, 59 seconds per mile.

OLD OPINIONS OFTEN CORRECT.

An opinion very long since prevailed that the beneficial effect of snow on vegetation was produced by the nitre (saltpetre) contained in it, and that the same salt existed in hoar frost. Thompson undoubtedly entertained this idea, when he wrote his "Winter," in which he alludes to the fertilizing influences of snow.

Chemists, however, some years since, exploded this notion; but the nicer analyses of modern investigators have detected alike in snow and in rain water, the nitrogen which was dissolved in the atmosphere, showing that "there is nothing new under the sun," and that our forefathers were not so ignorant as we idly think them. The most profound researches of chemists, also, now prove that the old practice of fallowing was based on the soundest chemical principles; and that, in the days when cattle were principally maintained on common pastures, and manures consequently rare, nothing could be better for the soil than frequent fallows.

How to Render Night Soil Inodorous.—By mixing this substance with burnt mud or peat, and finely-pounded charcoal, its odor will be instantaneously removed, while they will retain the ammonia, by means of the power they have of absorbing that substance. The quantity of charcoal or burnt mud necessary to be used, will depend on circumstances, and can only be determined by actual experiment. As a general rule, one part, by measure of the charcoal or peat, to five parts of the night soil, will be sufficient to remove the smell and form a rich manure.

CULTIVATION OF CELERY.

THE kinds of celery (*Apium graveolens dulce*), preferable for general culture, are those known by gardeners under the names of "Common Upright Italian," "Large Hollow Upright," and the "Solid-stalked Upright," all of which may be raised from seeds, sown in the middle and northern states, with slight forcing, from March until the first or second week in May. One ounce of seed is sufficient for 10,000 plants, and may be sown in drills 6 inches apart, in hot beds, or rich, mellow borders, after the manner of cabbages, watering moderately in dry weather both before and after it is up. As soon as the plants are 2 or 3 inches high, they may be transplanted 3 or 4 inches apart, in a sunny situation, into temporary beds, formed of old hot-bed dung, or well-rotted stable manure, mixed with one fourth of its bulk of finely-pulverized earth. These beds should be laid 6 or 7 inches thick on a plot of ground having a surface made hard by compression, or one that has not been broken by the spade or the plow, in order to prevent the pushing of tap roots, and thereby prevent the celery from running to seed, before the following spring. The nursling plants should be watered daily until they have taken firm root, and as often afterwards as the dryness of the weather may require.

When the plants have acquired a height of 6 or 8 inches, they may be removed, in monthly succession from June until September, into a soil rather moist, and rich in vegetable mould, but not rank from new or unrotted dung. Previous to the last transplanting, the ground should be thoroughly worked with the spade or plow, to a depth of 12 to 18 inches, according to the nature of the soil, and then divided into trenches 12 inches deep, 18 inches wide, and 4 feet apart from centre to centre. The trenches should next be filled, 9 inches deep, with a compost of well-rotted dung, mixed with one fourth of its bulk of strong sandy loam. The plants should be taken up from the nursery beds, with as much soil as will conveniently adhere to their roots, and after removing the side shoots from the stems, they may be set, by hand, 9 or 10 inches apart in the centre of each trench, watering them as often as the weather may require, until they are ready to be earthed up.

As the plants in the trenches rise from 10 to 15 inches high, you may commence "landing," or "earthing," them up for blanching; but never do this while they are wet. In the first two mouldings, the earth should be sparingly raised to the stems, forming a slight ridge on each side of the rows, and leaving a hollow to receive the full benefit of the waterings or rain. When the plants become strong enough to bear a mould 6 inches in height, the earth may be drawn up equally on each side, preventing it as much as possible from falling into the hearts of the plants by keeping closely together the outer leaves. This may be done by tying together long bands of bass matting, fastening one end to the outer plant in the row, then passing it to the next plant, giving it a turn round the leaves and so on until the row is complete. When the moulding is finished, the string may be unravelled and used for the next row. The operation of earthing up should be repeated once or twice a fortnight, until the plants are ready for use, gradually diminishing the breadth of the top of the ridge, until it is drawn at last to a point near the tips of the plants.

The celery intended to be preserved during winter should be unearthed and cut off close to the roots. A ridge of earth should next be formed of a height corresponding to the length of the heads, which should be placed parallel to each other up and down the sides of the ridge. More earth may then be banked against these heads, and the operation alternately repeated until you dispose of the whole crop. If the celery thus preserved be liable to suffer from frost, the surface of the deposit should be covered with a layer of litter or straw from 3 to 9 inches thick, which may be removed as fast as the heads are dug up for use.

A large portion of the celery, sold in the New York market, is produced at Harsimus, near Jersey city. The past season, Mr. Benjamin Mills, of that place, raised 60,000 heads, which at 6 cents each, would be worth $3,600. Messrs. John and Francis Brill, raised each, 40,000 heads. The mode of culture practised by these gentlemen, we are informed, differs but slightly from the one above described. Their ground consists of a rich loam, resting upon a subsoil of clay. It is well worked with the plow to a depth of 12 to 14 inches, and is liberally supplied with well-rotted stable manure. The early celery is planted in trenches 6 inches deep, half filled with manure; and that of later growth is set in drills filled level to the surface with the same kind of manure.

DIRECTIONS FOR SACKING WOOL.

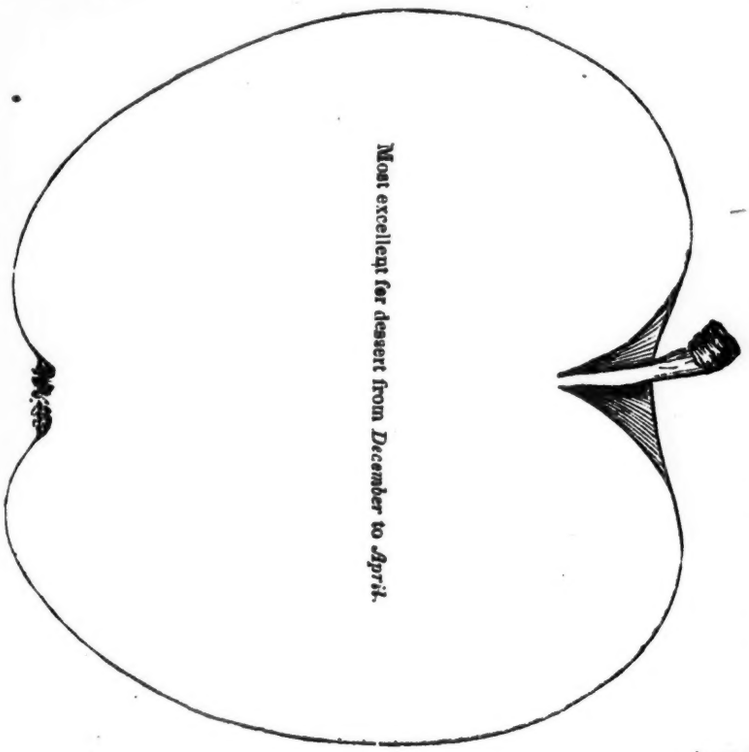
WOOL, intended to be sent to a distant market, may be put up and pressed in bales after the manner of cotton, or it may be crowded into sacks holding from 200 to 250 lbs. If designed to be shipped on a long voyage, it would be more economical to press it into square bales, as it would then occupy less bulk, and consequently effect a saving of freight. But in the interior of a country, where conveniences for baling are not always at hand, sacks may be employed, made of 40-inch "burlaps," or 45-inch "gunny cloth," 7½ feet long. Each of these sacks may be made of a piece of cloth 5 yards in length, by doubling the ends until they meet and sewing up the sides with twine.

The mouth of a sack may next be sewed to a strong hoop of wood or iron (diameter 25 inches for the burlaps and 28 inches for the gunny cloth); then let down its body through a circular hole, two inches less in diameter than the hoop, cut in an upper floor of a building, or of a temporary scaffold erected for the purpose, where it can swing clear beneath. One man may then get into the sack, while another hands him the fleeces, which he should place in regular layers, pressing them down in the meantime, with his feet, until it is filled. After this, the sack may be slightly raised, the hoop disengaged, the mouth of the sack sewed up with twine, and the operation is complete.

KEEPING WORTHLESS DOGS.—It is universally admitted, that what will keep a dog would keep a pig. It need not be said then, which would be found the most profitable to a poor man's family, at Christmas, a dog for his children to play with, or ham and good bacon to fill their stomachs.

CHOICE VARIETIES OF APPLES.

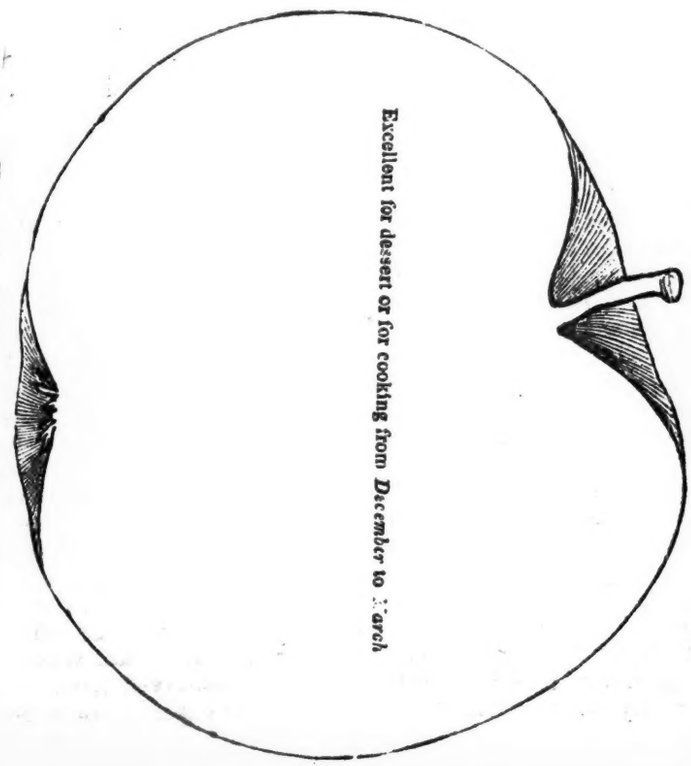
ESOPUS SPITZENBURG.—There are but few, very few apples, to which higher rank is awarded, than to this variety, possessing, as it does, the rare advantage of beauty and excellence of quality combined. It is said to have originated at Esopus, a famous apple district, on the Hudson, where it is still raised in the highest perfection. It is also extensively cultivated in Western New York, where, from the richness of the soil, it attains great beauty and size, without loss of flavor or being inferior in any other way.



ESOPUS SPITZENBURG.—FIG. 17.

The size is full medium, with an oblong outline, and a skin fair and smooth, of a fine clear red. Some specimens are of brilliant hue on the sunny side, while the opposite side is of a yellowish cast. The flesh is yellow, and in the language of Coxe, "singularly rich, juicy, and sprightly." The stem is of medium length, and well planted. And the calyx is in a shallow depression. It abounds in the New York markets for nearly six months in the year.

KAIGHN'S SPITZENBURG.—This variety takes its name from the original cultivator, the late Joseph Kaighn, of Kaighn's Point, New Jersey. It somewhat resembles the Esopus Spitzenburg, although its outline is more like that of the "Summer Queen." The color is bright red, delicately streaked, and marked with whitish or yellowish dots, by which it may readily be known. The skin is smooth; the flesh juicy and well flavored; the stem deeply seated and rather long; and the blossom end is frequently more pointed than the specimen denoted by fig. 18.



KAIGHN'S SPITZENBURG.—FIG. 18

PREPARED GUANO.

WE can assure the farmers that all substances offered them under the above name, at a cheaper rate than the natural guano, are *gross humbugs;* and we think it our duty to warn them against their purchase. In our last volume, page 301, we gave instructions for making a first-rate article of "prepared guano," at a cost of not over *half a cent to three fourths of a cent per pound!* The ingredients are simply these: Take 100 lbs. of Peruvian guano, and mix with 100 lbs. of fine charcoal dust, or plaster of Paris, and 300 lbs. of rich mould, or peat. These materials will make 500 lbs. of as good *prepared guano* as can be found in any puffer or humbugger's shop in the Union, at double their cost.

We are very much surprised that so highly respectable bodies as the New York State Agricultural Society, and the American Institute, should recommend such things before submitting them to the most careful chemical tests, and various, long-tried experiments by the side of the natural guanos. Peruvian guano has been in use for years, on all kinds of soils, growing nearly every variety of crop, in almost every climate. Its good qualities therefore are well known and approved of, by thousands of practical farmers, planters, and gardeners. Can so much be said of any prepared guano? These compounds have often been condemned in Europe as gross frauds, the *knaves* selling them having frequently been prosecuted and heavily fined.

LETTERS O.' R. L. ALLEN.—No. 2.

I HAVE found many things in the south worthy of commendation, some of which I have noticed in the preceding volumes of the Agriculturist. There are a few deserving of censure, one or two of which I will now state, not for the idle purpose of fault-finding, but if possible, to produce a reform. Reasonable men, desirous of improvements, as I believe your readers in this section are, will not fail to approve of just and proper criticism rather than indiscriminate praise.

The first reform I would suggest, is the wider circulation and more careful perusal of the best agricultural periodicals, and a deeper investigation of those agricultural *principles*, which lie at the foundation of successful farming. It is true, that on a fresh, fertile soil, with good implements which are now procurable in most of our leading cities, and with the common modes of cultivation almost everywhere adopted, one may get along for a time very well; and if the soil be sufficiently deep, one, two, or perhaps even three generations may succeed, with industry and economy, in not only securing a good livelihood, but in accumulating property to no inconsiderable amount. But if the history of the past, the embodiment of others' experience, and the principles deduced from both, which we call *science*, be unknown, or unheeded, there will come a time when the crops of the occupant must suffer; and if this neglect be continued, his lands will become impoverished to the extent of withholding all adequate return for the labor and capital bestowed upon them; and he is driven as a last resource, to the abandonment of his paternal acres, endeared to him by a thousand social recollections, to seek in the untamed wilderness, amid disease, privation, and solitude, that remuneration for his toil, which a small portion of science would have realized from his long cultivated fields. The dreaded apprehension of *book farming*, that bugbear to the unthinking and heedless, has kept him from learning the operations and results of innumerable other, older, and wiser heads, than his own, which would have enabled him not only to avoid want, but to have secured a competence, while surrounded by all the comforts and delights of a refined society. Thousands of these examples are furnished annually throughout the whole south; and where purchasers cannot be found for their impoverished domains, they are frequently abandoned to resume their primeval condition of unreclaimed wildness. How this deplorable result may be avoided, can be easily learned by any intelligent person who will read our best American agricultural periodicals and books, and carefully, *cautiously*, if you please, adopt such principles and practices as may be adapted to their particular wants and situation.

The economy of this course withdraws every objection against its adoption. For the paltry sum of $50, one may obtain a well-selected library of the most valuable agricultural books suited to the peculiar products of any ordinary planter; and for $5 per annum, he may secure an equal number of periodicals, which may, if judiciously read and applied, produce him twenty times their cost in his augmented crops. This then, is one of the first and most essential reforms I would suggest for every portion of the Union, but more especially for the south, where the sparseness of population generally, prevents that ready and extensive interchange and observation among the farming community, which other and denser settlements afford.

The second neglect I would mention, is equally indefensible, though perhaps not equally injurious with the first. It consists in that want of *association* or combination of mind, engaged in similar pursuits, which is elsewhere secured by farming clubs and agricultural societies. Through these, the common stock of experience of every planter is brought into one focus. Individual opinions, practices, and results are collected from every quarter, and are here analyzed and compared, and from the combination and comparison of all, a more perfect system is perhaps deduced, than may have been practised by either, not excepting the most successful. The experience of each becomes the property of all; and the best practice of the past year may be the worst of the succeeding; not that this has lost any of its merits, but because others have been substituted more worthy of adoption. Improved varieties of seeds, new species of plants, choice specimens of animals, implements combining better principles and more skilful workmanship, are exhibited; and the researches, ingenuity, and experience, it may be, of a hundred active and intelligent men, are thus brought to one common storehouse, to constitute a general capital for every member of the community. The effect of this annual concentration and diffusion of results among intelligent minds need not be particularized, for they are evident on the slightest reflection, and are abundantly shown wherever adopted.

The extent to which anti-socialism in agricultural matters is sometimes carried, is almost incredible. An enterprising planter who has adopted some of the improved modes of cultivation with success, assured me, that although a Creole, 40 years of age, and engaged in extensive operations, he had never seen the cane planted or sugar made on any other plantation excepting his own. With the utmost enterprise and intelligence, individual action exerted alone, always works to a disadvantage. It is using the short end of the lever, while the long end is within reach.

We have for instance, choice kinds of tobacco, which is successfully raised within this state, worth several times the price of the ordinary kinds, yet few know where to procure the seed, or the mode of raising and curing it. This might be easily attainable through a common society, and if but a few seeds were procured by each, they would soon become widely disseminated. Indigo is still cultivated to a limited extent in some bye places in the state; yet no one hears of it, or knows where and what results are obtained; the mode of cultivation, or the means for procuring the seed, or the best system of cultivation. Immense bodies of lands here, every way well adapted to the culture of rice, lie in utter waste; but if the most successful mode of culture were known, many would be induced to go into it. It is not sufficient to tell them the best modes of raising it elsewhere, for they reply, and justly enough, too, that there are differences of soil, climate, tides, irrigation, &c, which, if foreign modes were strictly observed here, would result in loss. Successful examples, close at home

and under circumstances similar to those which would control them, are what are essential to commend them to their adoption.

In the introduction of improved implements the effect would be similar and far more productive of immediate and wide-spread improvement. Most planters are chary of purchasing and supplying these, from apprehensions of unfitness for their particular wants. With many, argument or illustration are of no avail in commending them to their use. They wish to see them tried, yet there is little hope of their realizing so desirable a consummation, and an association that would bring the planters together at stated periods, would afford an opportunity of mutual communication, and collect in one point the combined experience of all. This would dispel doubt, inspire confidence, and save to each the trouble and expense of multiplied experiments. A hundred experiments, undertaken by as many persons, would be thus as equally available to each, as if conbinedly undertaken by one; and while the burden of trial would be divided, the benefits would enure to all participating in them.

The benefits arising from the extensive use of implements better suited to the cultivation and conversion of farming products are great and not generally estimated. If, for instance, a style of plow could be introduced that with the same expenditure of force (team), would effect this division and pulverization of the soil more perfectly, crops would be largely augmented at no increased expense. If to this improvement, economy in their use, better and more scientific construction—if of more durable materials, and more cheaply repaired—if these several advantages be superadded—a large and important advantage is thus secured. Now this is precisely what is claimed, and I think justly, in the use of the best and most approved cast-iron plows. And in almost every instance where they have been fairly tried, these advantages are conceded. One planter told me he had used three plows 115 days without apparent wear, or any repairs, and had never before used a wrought-iron plow longer than 15 days without requiring to be taken to the smith for sharpening. Their merits are acknowledged by those who have used them; they are denied only by those who allow preconceived opinions (prejudice), to usurp the place of experiment. What is true of plows is equally so of numerous other implements, but I cannot further particularize.

New Orleans, Jan. 4th, 1848.

Application of Marl.—Experience proves that marl is a treasure to the farmer when properly applied to light sandy soils; yet, the same experience teaches him, that it cannot be applied, with success, to weak, worn-out lands, without some kind of vegetable or grassy matter covering the surface to prevent it from sinking into the earth. Therefore, instead of being applied to broken ground, it is better that all clays and marls, should be spread on the sod in the form of top dressing, where they should remain for one or more years, in order that the frost may shiver and temper the clods by bringing their particles to a complete separation, and where the vegetable matters may putrefy, keep moist, and cause a fermentation that will mix or unite these bodies together.

ACCLIMATIZING HALF-HARDY TREES OR SHRUBS.

I have several hundred pomegranates, which have been flourishing for four years in open ground. About the 1st of November, in each autumn, when the plants were small, I had driven, at suitable distances around the plot, several slight posts, to which were nailed, only for the winter, some rough boards, simply making a rude board fence. On the top of this fence, loose boards were laid over-laping each other, unnailed, forming a kind of roof. Early in March, each year, the whole of this structure was removed. By this protection, the trees have now become so strong and vigorous, and so firmly attached to the soil, that a simple binding in straw will suffice for their protection; and perhaps even this may not be permanently required.

Fig trees succeed by the same treatment; also, the Eriobotrya japonica, Zizyphus jujuba, Nandina domestica, and even the Camellia japonica, several varieties of the Azalea indica, Rhododendron arboreum, in all of its varieties, as well as the Lagerstrœmia indica. The Chimonanthus fragrans, Aucuba japonica, and some of the rhododendrons, when quite small and weak, require a slight protection of straw or earth; but after a couple of years they need no covering to withstand the winters here as perfectly as the most common shrubs. The Euonymus japonicus, both the green and variegated-leaved varieties, need no protection whatever, and there are no two shrubs of the evergreen class that are more beautiful. Wm. R. Prince.

Linnæan Botanic Garden, Flushing, January 4th, 1848.

INFLUENCE OF FORESTS ON THE DISTRIBUTION OF RAIN AND HAIL.

In every instance, and in every country of the globe, where the forests have been cleared, a diminution of the fall of rain or snow has been the result; and these regions annually suffer, more or less, from tempests or storms of hail. In some parts of Europe, it is well known that insurance companies against hail demand, for certain districts, a higher premium than in others on this account.

The evidence of Humboldt, Von Buch, Daniell, and others, is so powerful on this subject, that it should be particularly impressed upon the attention of the reader how important the existence of wooded spots become to the agriculturist. "By felling the trees that cover the tops and sides of the mountains," says Humboldt, "men, in every climate, prepare at once for two calamities for future generations—the want of fuel and the scarcity of water. Trees, by the nature of their perspiration, and the radiation from their leaves, in a cloudless sky, surround themselves with an atmosphere constantly cool and moist." Hence all large forests tend to attract the clouds formed by the condensation of the moisture which rises from the earth, and thereby produce an abundance of rain.

How to Make Metheglin.—Take honey 100 lbs; water 24 gallons; put them in a cask, and stir daily until dissolved. Then add yeast 1 pint, and a decoction, from 1 lb. of hops previously boiled in water, sufficient to make 6 gallons of liquid. Mix well and ferment.

EMPLOYMENT.

"I say, sir, it is employment that makes people happy."

Never was there uttered a truer sentiment than the above. Indeed, it is *employment* that makes people happy, and without it they must be wretched. Yet, how common it is to hear the laborer complain of his destiny, and long for the apparent ease and quiet of the man of affluence. 'Tis true most of us are looking forward to an imaginary time—a sort of Utopian existence—when the cravings of our nature shall be satisfied, and when we may lay aside the cares and anxieties that now cluster around us, and enjoy our *otium cum dignitate*. But should it ever be my misfortune to be so situated that I should have no occasion, and feel no desire, for further exertion—with no responsibilities resting upon me, and nothing to excite my aspiration—I should find myself more miserable than my worst enemies could wish me; and I would turn with melancholy retrospect to those by-gone days when existence was sweetened by employment.

There is no happiness in idleness. It was the decree of Omnipotence, when our first parents were expelled from Eden, that all their progeny should obtain their "bread by the sweat of their brow," and, as some one has observed, a *milder* curse could not have been imposed. But despondency is not the only evil result of indolence, for mind and body sympathize with one, and act and react upon each other. When existing in this unnatural state the energies stagnate, the wheels of thought move as though they were clogged; the affections become dormant; the vital fluids circulate with less vigor; and lassitude or debility seem to take possession of the whole system, mental and physical.

Let not the robust farmer, then, who feels the necessity of toiling for his support, bemoan his lot, nor suppose that his wealthy neighbor, who has surrounded himself with more splendor, and who reposes on a couch of down, is more happy than himself. *More happy* do I say? The laboring man enjoys more genuine happiness in one day than the wealthy lounger does in a month, and he should learn to regard the wretched man with pity rather than with envy.

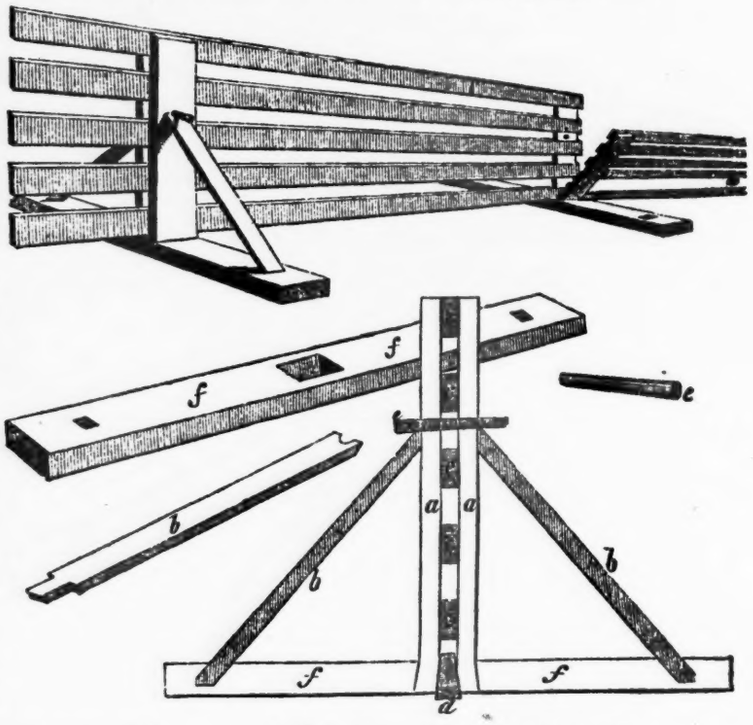
J. McK.

Greenport, N. Y., January, 1848.

Experiment with Asparagus.—The London Gardeners' Chronicle gives the following method of growing asparagus at Nice. Take a quart wine bottle, invert it over an asparagus root just rising from the ground, and secure it to its place by three sticks. The asparagus will grow up into the interior of the bottle, and being stimulated by unusual heat and moisture, will speedily fill it. As soon as this has taken place, the bottle must be broken, when the asparagus will be found to have formed a thick head of tender, delicate shoots, all eatable, and as compact as a cauliflower.

A CHEAP PORTABLE FENCE.

Herewith I send you a plan of a portable fence, which is considered of much value in this part of the country, where it is commonly used for subdividing pastures and fields; but it will answer well for outside fence, by increasing the height and base each one foot. Its chief value, however, consists in its portability. For pasturage or feeding standing crops to cattle, sheep, or swine, when the field is large, it is of much importance to confine these animals to a small part at a time, until it is exhausted; and, in succession, to feed over the whole ground. In this way, a field covered with red clover may be fed to cattle several times over in the course of the season, at a trifling expense.



A Portable Fence.—Fig. 19.

Description.—Separate pannels are formed of five rails *c*, *c*, *c*, *c*, *c* (fig. 19), sixteen and a half feet long, five inches wide, and one inch thick, made of good sound, tough timber, securely nailed, with wrought-iron nails, and clenched upon three battens *a*, *a*, those at the ends being six inches wide, one and a quarter inches thick, and three feet, ten inches long. The single battens are of the same material as the rails, four feet long, and joined as in the annexed drawing, which is a perspective representation of the fence, with one pannel in the act of being raised. Each pannel rests upon sills, *f*, *f*, four feet long, six inches wide, and two inches thick, having an angular mortice at each end to receive the foot of the braces, *b*, *b*, *b*. These braces are thirty-three inches long between the shoulders, and of the same thickness and width as the rails. The tenons of the braces may be one and a half inches wide and from one to two inches long, with a semi-circular notch in the upper end, designed to rest against the binding pin, *e*, *e*, which is twelve inches long, three quarters of an inch thick, and one and a quarter wide, at the wide end, tapered down to three fourths of an inch. It will be seen that the

pins are slightly tapering, so as to bind down upon the braces, and permit the pannels to shear a few inches in overcoming uneven ground. The battens are let into the sills through mortices, slightly dove-tailing at the bottom, and secured by the wedge or key *d*; or they may be furnished with knees made of strap iron one and a half inches wide, one eighth of an inch thick, and fastened with staples and nails.

This fence is designed chiefly as a hurdle, combining the advantages of great strength, lightness and durability. Twenty rods in length, make one common load, which is so easily taken down and set up again, that two hands, with a suitable team, can remove a quarter of a mile of it from one side to the other of a large plantation, and set it up again in a day. J. L. HARDEMAN.

Arrow Rock, Mo., Dec. 3d, 1847.

FACTS IN FARMING.—No. 1.

THERE is a remark we often hear, when urging farmers to take an agricultural paper, which is this: "Why, sir, there is nothing practical in them, or so little, that we will not pay our money for one." Now there is no truth in the remark; and in proof of my assertion, I ask of any candid reader if he ever knew a farmer who has attentively read an agricultural paper for two years, without improving his farming more than ten times the value of the paper? A neighbor of mine, an old man, has taken one for two years; and a few days since, he remarked to me, that he had made an improvement which was fifty dollars profit to him last year. After reading your articles on draining and irrigation, he drained a cold, wet field, and turned the water from it so as to run over a dry, adjoining meadow, thus "killing two birds with one stone," by draining the one and irrigating the other.

In 1840, I had six acres of land entirely worthless, being covered with bogs and bushes, upon which the water stood most of the year. I drained it, cut up the bogs and bushes, plowed and sowed it with buckwheat, for two years, and then seeded it down with Timothy. The result of my labors was as follows:—

160 bushels of buckwheat, valued at .	$80
8 tons of hay, in two years, ...	80
Increased value of the land, ...	150
	$310
From this deduct—	
For expense of draining, bogging, &c.,	$100.00
For seeds, plowing, harvesting, &c., .	118.50
	$218.50
Net profit,	$91.50

I would ask every farmer who has such land to "go and do likewise." It would be a better investment than to put out money on bond and mortgage; for in four years, and often the first crops will repay all expenses attending the improvement, it will be permanently valuable; besides the gratification of beholding that which was worthless and unsightly, converted into a productive and smiling field. I have for ten years made experiments in raising various farm crops, and in feeding them. I have experimented also, with a variety of manures. If this communication is of any value, and if you want more, I will furnish an article monthly, recording actual experiments and the results. D.

Orange County, N. Y., Jan. 8th, 1848.

The above is a valuable article, and we are much indebted to the writer for it. We trust he will give us others for publication. Here are the details of an improvement which any farmer can make, however limited his means. We wish to impress upon our readers that it is for the benefit of the small farmers, and those of limited means, as well as those of extensive domains that we write, and we hope in return that they will favor us with the details of their operations. Make no apologies, but *give us the facts*, and we will see that the printer puts the matter in such a shape as to read properly and correctly. There is no class of people with whom we so deeply sympathize, nor for whom we are so ready to toil, as the farmers. We care not how few their acres or how humble their improvements. It is the men and their occupation that interest us.

REVIEW OF THE AGRICULTURIST.

HAVING been called away from home during the autumn and part of the winter months, to visit my new lands in Maine, and oversee some improvements making in them, I have been obliged to neglect the Agriculturist for some time. I shall now give a brief review of the remaining numbers of the last volume, and endeavor not to be quite so much behind hand for the future.

AUGUST NUMBER.—*The best season for cutting bushes*, is not the month of August, and although it is a stereotyped saying, nevertheless, I think differently. I have known many persons put off cutting bushes when they had leisure to do it, waiting for the "right time in the moon," or some other *right time*, till at length *the time* never came *right*. I say, therefore, cut the bushes whenever your other avocations will permit. But what would be far better than the implement figured with the article now under review, would be to procure a *grubber*, and with it hitched to a good yoke of oxen, pull out the bushes by the roots. [For such a bush puller, see cut and description in Vol. v., page 139, of the Agriculturist].

Cisterns for Farm Buildings.—I wish to inform those who are hesitating about building a cistern on account of its expense, that I have known several of them made of the capacity of one hundred barrels, since I wrote upon this subject, with two barrels of cement, and but little mechanical labor, as the plaster was laid upon the sides of the pit, without any brick work, which any active farmer can do in part of a day.

Culture of the Sugar Cane.—If all of the readers of the Agriculturist have read this article with the same satisfaction that I have, they have already thanked R. L. A. for a fund of pleasure and useful information. I was not aware, till I read this article, that sugar cane was ever planted so wide apart as eight feet between the rows. If planters can only be induced to get into the habit of using the best of improved plows, cultivators, and other im-

plements, there will soon be seen an improved state of agriculture in the fertile, sunny region of sugar cane and cotton. Show me the implements of husbandry of any people, and I will tell you, not only of the condition of agricultural improvement among them, but of their moral and intellectual condition. It has been too true of the south-western portion of our Union, that their rude and unimproved implements have indicated a rude people.

Cure for the Foot Rot in Sheep.—This recipe may answer very well for a farmer who has only a dozen or two of sheep. But to catch and anoint the feet of a thousand head, every day for a week or two, would be no fool of a job. And less than that would be "no cure," and consequently "no pay" for the labor. As the articles can be applied in a liquid state, then for a large flock, put the preparation in a shallow trough, and set where the flock, in going to fold, will walk through it, and thus it will be applied to the feet without labor.

SEPTEMBER NUMBER—*Coffee Mills.*—First let us take a cup of coffee, ground in one of the mills that are so beautifully figured in this number. I have just returned from a visit to a family where one whole hour was spent in that miserable cold back kitchen, grinding coffee for breakfast, upon one of those abominable nuisances so abundant about the country, that the owners have so long been accustomed to call by the name of *coffee mill*, that they are at length led to believe in the truth of their assertion. My dictionary says: "Mill, an engine to grind;" but one half of all the things called coffee mills in the country are good for nothing but to grind away precious time; while here we have the representation of a most perfect article, for a couple of dollars; which if owned by a million of families in the United States, would save a million dollars' worth of time every year. So much for coffee. The other mills are equally valuable.

Farm Fencing.—"The system needs reform." The writer need not have said more. How could he?

Tethering Stock.—But this writer has said more—much, very much, in favor of dispensing with many cross fences. Mr. Marsh's system of fastening animals with poles instead of ropes or chains, is something new to me, and so good that I wish to commend it to all who would tether stock.

How to Fry Fish.—True as preaching, only more so. And if nut-cake friers would pursue the same rule, we should not so often have lumps of dough soaked in lard, set before us and called fried cakes. Bah! the nasty things!

Value of Hen Manure.—Truth again. And if it were imported from Peru, those who now waste it would buy it.

How to Make Apple Butter.—These are very good directions; but the article itself is by no means so good as the old-fashioned, New England apple sauce—particularly when it contains about one third part *quinces*.

The Horse Tamer or Whisperer.—Although I am not a believer in the humbug of animal magnetism, I have no doubt but it is owing to this science that some men are able to tame horses. I do not wonder that Sullivan never disclosed in what his art consisted; for he did not probably know himself. I have often thought that I possessed a small share of such power, but I cannot tell how nor why, unless it is animal magnetism.

OCTOBER NUMBER—*How to Whiten Linen.*—If this article should create a demand for chloride of lime sufficient to whiten all the "linen that has acquired a yellow or dingy color by careless washing," I should like to know it in time, as the price of the article would advance most enormously. To prevent the fluctuation in trade, I beg to add, that my grandmother—that was a long time ago—had a very excellent way for a farmer's wife, to whiten her linen, by some kind of process she used to put it through, in which soap and water and a nice grass plot were the principal ingredients. I presume that the same process would still answer, if the secret is not lost—as I believe that of spinning is!

Domestic Flora of China, No. 4—*Cemeteries.*—I have before commended these articles. From the present one, the "outside barbarians" might learn something from the *inside* ones. Reading this account of the Chinese manner of disposing of their dead, brings up anything but pleasing reflections upon the burial places of this country; and almost makes me wish that I had been born to die in a country where my last resting place would have been in a grove of flowers, upon the bank of a gently murmuring rill, or on the sunny side of some repose-inviting hill. "The flowers which the Chinese plant on or among their tombs, are simple and beautiful in their kind." What a contrast between those of our own country, covered with mayweed, mullen, hoarhound, burdock, and smart weed. And often located upon some waste piece of uninclosed, neglected land.

> "Ye living men come view the ground,
> Where you must shortly lie,"

and say which are the greatest *barbarians*, ourselves or the Chinese?

Long Island Lands, No. 1.—This is a most interesting article, and adds greatly to our stock of information concerning a large tract of land lying near enough to New York city to be advantageously cultivated as market gardens; taking into account water and railroad facilities, and yet it is less known and appreciated than are some of the actual deserts of the far west. Talk not to me of emigrating to Virginia, Illinois, Texas, nor California, while untold acres on Long Island are lying waste within three hours' ride of this city. I suggest the formation of an association similar to one formed in France some years since, to furnish cultivators to the extensive mossy moors of Flanders. Can you publish an account of it? [We will see hereafter]. It needs but small capital and plenty of laborers. New York can furnish the first and emigrant ships the latter in great abundance.

Cost of Light.—C. D. has the thanks of his "quaint and amusing friend," and will please to give us *more light*. By the by, which of the definitions of "quaint" did he mean? Nice, pretty, exact, or odd? [He doubtless meant the *second*, as Reviewer is well known among his friends as a very *handsome* man—the word *pretty*, however, would be more appropriately applied to his daughters]. He does not know me, that is evident; for

I am not even ugly enough to make me odd. Though "comparisons are odious," I will not think your correspondent so, if he will make the comparison between tallow, stearine, wax, &c., including lard, if you please, in the common household lard lamp.

Smoke Houses.—The grand secret in smoking meat is to apply it to the hams cool, and never so intensely hot as to destroy the vitality of the atmosphere. Give the smoke room a free vent at all times, and don't smoke in damp weather. This idea is not original, but I have proved it good.

NOVEMBER NUMBER—*Saur Kraut.*—"If any be left it is equally good warmed over." Hai-yah, too muchia true. And so is

Texas Enterprise, as in this short article set forth, where "they have a most luxuriant soil and proverbially healthy region." Through all time and space, the first breaking up and cultivation of luxuriant soils in a mild latitude have, and ever will, produce bilious or aguish diseases; and all who desire to emigrate from an old worn-out, or sterile soil, to a luxuriant one, should be made acquainted with this inevitable law of nature.

"Excellent land," says the Texan writer, "well watered and timbered, can be had for one dollar an acre." Better land for the growth of health and happiness, and increase of all the domestic comforts of life, can be had within half a day's ride of your office, Mr. Editor, for less money, taking into account the cost of emigration, and making that *cheap land* into a farm. Heaven knows that Texas land ought to be cheap, for an awful quantity of human blood has already been poured out to purchase it.

Western Agriculture—Corn Cobs.—I am glad to see that Mr. Robinson is still flying about among the pigs, and giving us interesting descriptions of the manner of making them into pork and other matters. Some of the things here stated are instructive, and others quite amusing. That about corn cobs being good feed, made me involuntarily begin to hum that elegant extract from the poetic writings of old Mr. Yankee Doodle, in which he so earnestly calls upon the aid of corn cobs to screw another idea out of his head; for he says,

> "Corn cobs twist my hair,
> Mortar pestle pound ye!"
> What hearty food I here will add,
> The corn cobs when ground be!

But ridicule is not the best way to arrive at truth, and therefore I forbear; and if there really is any nutriment in corn cobs, I hope it will be ground out, so that if any of the family of Yankee Doodle should ever come this way again, they would have to look for something else to twist their hair with besides corn cobs. [Mr. Reviewer had better be quiet, as we shall soon have a corn-cob story to tell him which will make him stare, and prove that Messrs. Robinson and Ellsworth are right].

As for the matter of a *square barrel of flour*, which I am invited to discuss, I think, Mr. Editor, that you have rolled the argument so far, that I need not give it another kick.

Long Island Lands, No. 2.—Another most interesting article. The analysis shows how easily these lands may be improved. As the natural fertility of the Hempstead plains is sufficient to produce a good crop at first, it is evident, that by turning in green crops and manuring moderately and using lime and ashes, the fertility can be kept up and increased. But let us hear further. This is a very important discussion. None more so.

Granger's Cooking Stove.—My wife says that the one figured in the October number is much the best. She is very anxious to try the new plan of a brick oven in a stove. *If* it will save cooks the sin of so much bad baking, as is now done in common stove ovens, Mr. Granger will deserve a gold medal for his invention.

Buckwheat Cakes.—Of course Mr. Granger's stove will bake them if well mixed, which "dear Jane" is poetically called upon to do in the Ladies' Department of this number. But no mixing of batter will make *the best* cakes, unless the meal is right, and this cannot be right, unless the grain is clean, and this cannot be, unless the mill has a good smut machine, and then it must not be ground too fine, nor the shorts rejected; but mix them with the flour, or add a little wheat shorts or corn meal; and although the cakes are not so white, they will be more light, more tender, and exceedingly palatable.

DECEMBER NUMBER—*Farmers' Winter Work.*—Surely, my dear sir, in this article you have forgotten the wood pile that should always be got up while the sledding is good. What greater pest to a farmer can be conceived of, than the constant call through the busy season of seed time and harvest, of "we *must* have a load of wood to-day." What bad economy, too, to say nothing of burning green wood, and the necessity of sacrificing a few dry rails every now and then for "oven wood." It is a great mistake to say that at this season farmers and their teams have but little to do. You might have said that many of them do little. But really, there is no waste of time upon a well-managed farm. Even in stormy days, there will always be found plenty of work in the shop; a room that every good farmer will have, where the sled can be made or shod while the snow storm is howling outside. An ox yoke made, or plow mended, and where a stock of axe handles, hoe handles, ox bows, beetles, gluts, &c., &c., should be made in stormy days and laid up until needed. Here too, may the winter evenings often be spent, though never to the neglect of plenty of good reading, social chat, and "Winter Evening Fireside Tales." Such are blessings of a farmer's life, and never should be bartered away for an increase of wealth. It is upon such an evening that I am holding converse with the readers of the Agriculturist. May their number be legion.

American Fresh Meats in England.—If you please, Mr. Editor, you have not stated the "only objection to an extensive business of this kind." The grand objection is, a want of permanency in the market. If I adapt my farm and stock to the purpose, and invest a few thousand dollars in the business of supplying the London markets with American fresh meat, how am I to be assured that the market will continue open to me? Any business to be good, must be permanent. But whenever our only or principal dependence is upon a foreign market, for our agricultural productions, then our independence is at an end. There is no market for the farmer equal to a *home market*.

Reflections for the Farmer.—"There never was a class of people more blessed or more prosperous than the farmers of the United States now are." This is a self-evident truth. Yet I fear that they do not reflect and feel so thankful as is due therefor. Abundance of food is so great throughout the land, that we cannot realize the blessing of such abundance, because we have never known scarcity. It is almost impossible to hear of one of the cultivators of American soil, suffering for food. How easy too for the poor laborer to supply the wants of a family. In many parts of the western states, a single week's work at this season of the year, of a common laborer, at 50 cents a day, will procure eight bushels of Indian corn, four bushels of potatoes, or 100 lbs. of good pork or beef. What a week's supply this would be for a family of starving Irish. Truly, American farmers are blessed with an abundance of the fruits of the earth.

Six Samples of Back-Jersey Farmers.—All of these portraits are so true, that I have already found more than six dozen originals for each of them.

Decomposition of Manures in the Soil.—This letter of Mr Norton's upon the subject of the fertilizing quality of manure settling into the earth, appears to me sufficient to settle the question. In corroboration of his remark upon grave yards, I can call to mind one in particular, in good old New England, that has been more than a hundred years in use, which is located upon a gravelly hill side, and the surface of which is very barren, while a piece of mowing ground at the foot of the hill, has long enjoyed the benefit of the decaying bodies *leaching down* upon it.

American Forest Trees.—Our friend, L. F. Allen, has undertaken to plead an apology for the ruthless destructive disposition of the universal Yankee nation, in sweeping down all the forest trees from the land they are clearing for cultivation. But the proof adduced, does not sustain the plea in my humble opinion. I have seen the most beautiful park trees that ever grew out of the earth, in the burr-oak openings of the west, as ruthlessly destroyed as I have of any other worthless forest trees. It is the want of cultivated taste, and not the fear that the trees saved from the axe will perish in the storm, that strips the newly-cleared forest farm of every vestige of shade for man and beast, when toiling in the field or cropping the pasture.

And here I close the volume for 1847, assuring your readers that they shall hear from me again. I have been highly interested in my trip "down east;" it is the second time I have visited that country, and I find it going ahead now about as rapidly as the great west. Finding myself so near, I had the curiosity to cross over to Nova Scotia and take a look at the "Blue Noses." I there fortunately made the acquaintance of that renowned personage, *Sam Slick*. His shrewd observations, ready wit, and humor, instructed and amused me beyond measure. I wish you could get him to write for the Agriculturist. REVIEWER.

HOW TO BRING SOWS IN SEASON FOR THE BOAR.—A peck of rye, given to a sow, let her be ever so poor, it is said, will cause her to take the boar.

CULTIVATION OF THE OSIER.—No. 2.

Management.—Osier plantations must be carefully cleaned and hoed every year. Nothing contributes more to the raising of a good crop of twigs, after due preparation of the soil, than keeping them clean. The stools should annually be attended to from the first year of cutting a crop of twigs, by clearing the rotten stumps, and not allowing the plants to be over-crowded by the young shoots at their base. When these have become too numerous, they should be carefully thinned out, and also cut down, leaving only one or two eyes at the bottom of each, until they are reduced to such a number, as the stool is capable of vigorously supporting until the fall of the leaf. A basket maker finds one shoot of 6 to 8 feet in length of more value than four of 3 feet in length; and one of the former of these dimensions will not so much exhaust the stool nor the land as four of the latter.

The proper season for cleaning and thinning the stocks is in March or April, or a month or six weeks before the osier puts forth its leaves. The reason of choosing this period for the operation is, that, if it were performed in autumn, the germs of the buds existing at the base of the small shoots, which have been cleaned off, would swell, in the course of the winter, and be liable to throw out shoots in the following spring; whereas, by delaying the cutting of these, till the sap is in motion, the germs remain dormant, and the whole current of sap is taken up by the buds already formed. The cleaning of the plants may be done with a sharp knife, and, if it has been regularly attended to from the commencement of the plantation, it is neither troublesome nor expensive. Indeed, this care is deemed necessary, were it only for guarding the plants from the ravages of insects.

Cutting and Disposing of the Crop.—The proper season for cutting the basket willow is in autumn, directly after the fall of the leaf. The advantage of cutting at this period is, that the buds which are left to produce the shoots for the succeeding crop, immediately begin to swell, and grow in strength during the winter, in consequence of which, they make much earlier and more vigorous shoots, in the following spring. As soon as the rods are cut, they are generally tied up in bundles, 3 feet, 9 inches in girt; and if they are not intended to be used green, that is, with the bark on, they may be set on their thick ends, in standing water, to the depth of 3 or 4 inches, where they may remain during winter and spring, until the shoots begin to sprout, when they are ready to be peeled. Sometimes it happens that osiers are cut with the leaves on, in which case, they should never be tied up in bundles, on account of the fermentation that would be produced, by binding them closely together in that state. Therefore, they should be set up, thinly and loosely, on their ends, with their tops leaning against a rod supported on two props.

The operation of *peeling* is so very simple that it may be done by old infirm persons at a stipulated price per bundle. The apparatus employed for the purpose, consists of an iron fork, about 16 inches long, with tines or prongs about half an inch in diameter, placed sufficiently near each other to pinch the osier rods, and tapering somewhat towards their tips. The shank, or large end of the fork,

should be sharpened to a point, so that it may easily be thrust into the ground. When the shank of this implement is firmly inserted into the earth, or in a block of wood, the peeler sits down, taking a rod or twig by the small end, in his right hand, and puts a foot or more of the thick end between the prongs of the instrument, which he then presses together with his left hand, while with his right, he draws towards him the rod. By this operation, the bark of the large end will, at once, be separated from the wood; and by shifting or reversing the ends of the rod, and drawing it through the fork, the peeling will be complete.

The rods, when *whitened* or peeled, are usually tied up in bundles, the bands of which are 3½ feet long. In a peeled state, they will keep better to wait a market, than if left with the bark on; for it is stated, that they never fail to produce a greater return, notwithstanding the cost of the labor of peeling, than when sold immediately after they are cut from the stool. In Germany, and also frequently in Scotland, the osiers, after being cut and tied up in bolts, are stacked, or kept in an airy shed; and, when the bark is removed, it is effected by steaming, or boiling them in water. Rods thus prepared, are considered to be rather more durable than when the bark is separated, in consequence of the rising sap; and they may be worked up directly after cutting, instead of remaining for several months in a useless state.

FENCES A DIRECT TAX TO THE FARMER.

In reading Mr. Bacon's article on this subject in the August (1847) number of the Agriculturist, there was one sentence, in particular, which I thought ought to be printed in large type and stuck up at every rod of fence in the country. It is this: "There must, indeed, be a horrid lethargy pervading the mind of the body agricultural while they go calmly, and indifferently, and *drudgingly* on, and *voluntarily* submit to an evil for whose existence there is no pretext or excuse."

Farmers! turn back to page 252 and read this article of Mr. Bacon's again. Think of that township of land, only four miles square, that requires *one hundred* miles of road-side fence! Recollect that this is not an extraordinary case. The whole of the great tract of country in the north part of Ohio, known as the Western Reserve, is laid off in squares almost as exact, though a little larger than the squares of right-angled Philadelphia. And in Michigan, and perhaps some others of the western states, every section line is a public highway by law. This gives seventy-two miles of road, and *one hundred and forty-four* miles of road-side fence, for every congressional township of land, six miles square; besides the occasional "cross roads," and those which do not follow section lines. To fence the roads of such a township with an ordinary rail fence will require *four hundred and sixty thousand, eight hundred* rails; all of which must be renewed every few years. Count these rails at only one cent each, and the cost is $4,608, which at six per cent. interest, is $276.48; while the annual decay and cost of repairs, is at least, as much more, making an annual tax of over $500 for road-side fences in each township. And all for what? I beg of every reader to repeat the question. And this view of the case is not exaggerated. In many other states, the cost of fencing materials is more than four times as much, and roads equally plenty, to say nothing of division fences through the farms and between neighbors, the great cause of half of the neighborhood quarrels and vexatious law suits, besides the enormous amount of cursing bad fences and breachy cattle.

And yet men "voluntarily submit to an evil," the cost of which is beyond calculation. If every man were directly taxed for the cost of the Mexican war, we should have an outcry louder than the din of battle; and yet that tax would not amount to a tithe of the enormous annual *fence tax* of the United States.

"Farmers, think of it!" Reason upon the subject. Do not scoff at it as the vagaries of "the crazy advocates of the *non-fencing* system." If I rightly understand the creed of all those who advocate this system, it is this: *That every man take care of his own animals*—and *not* compel his neighbor who keeps none, to build miles of costly fence to guard his crops from the depredations of his neighbors' cattle and hogs, which he turns out to roam at large without a keeper, or care where they forage their feed.

I cannot better conclude this article, than by quoting the closing paragraph of Mr. Bacon's, and at the same time assure him that "I go the whole hog," as we say out here, against the worse than foolish fencing system. "Oh! when will the agricultural public be sufficiently awake to their interest, comfort, and those of the travelling public, to remove these appendages from their premises, [the road side], and rid themselves of a grievous burden?" Echo answers, "Oh! when."

SOLON ROBINSON.

Lake Court House, Crown Point, Ia., January 15th, 1848.

POTASH A PROPER FOOD FOR GRAPE VINES.

HAVING, last year, seen it stated in a paper, that the ashes of grape vines contained a large amount of potash, I caused three vines, of the same size, to be planted in boxes filled with equal quantities of earth, in which I noted the following results:—

No. 1, was supplied, when necessary, with pure water, and in a given time, it increased 6 inches in length.

No. 2, was watered with a solution of whale-oil soap and in the same length of time acquired 9 inches of growth.

And No. 3, I watered with a decoction of potash, and within the same period as above, it grew 18 inches in length!

By the beginning of November, No. 1, and No. 2, dropped their leaves and showed no signs of fruit; whereas No. 3, retained its leaves three weeks later, and in the course of the season shot forth several bunches of fruit, which, of course, were not suffered to grow. This shows the importance of knowing what kinds of salts go to form wood and fruit, in order that we may apply such manures to the soil as the vine or fruit trees require.

I wish we could have full analyses made of our great staple, Indian corn, including the grain, cob, stalk, and blades. ROSWELL L. COLT.

Paterson, N. J., Janury 14th, 1848.

THE SHEPHERD DOG.

The animal described by the figure below, is of the long-haired Scottish breed, and belongs to the same family as the Newfoundland and poodle, which embraces the most intelligent and useful of the canine species. There are two classes of these dogs, which differ widely in their size and characteristics.

The larger is of great size and courage, and when protected by a stout leather collar, studded with spikes, is a full match for the wolf. These dogs are used by Spanish and Mexican shepherds, on their wild sierras, as effective guards against the attacks of all marauders, and are essentially the same race as the far-famed dogs of St. Bernard. They are not sufficiently gentle for guides, and the shepherds who employ them, rely on some well-trained wethers or goats to lead the flock at their call. Some have been imported into this country, but on account of their headstrong and ferocious

Fig. 20.—Shepherd Dog.

character, and occasional depredations upon the flocks, they have been found usuited to our wants, except on the borders of the wilderness.

The Colley, or Scottish sheep dog, the English, and those extensively used upon the continent, differ much in their form and appearance, but agree in their intelligence, docility, and usefulness. They are of medium size, with a sharp nose, broad forehead, and small upright ears; they are both shaggy and smooth-haired, with a bushy tail, and much hair about the neck; variously colored, though more frequently inclined to black or darkly spotted and grey; and one branch of the family is entirely destitute of a tail. They possess an instinctive sagacity for the management of sheep; and in company with a well-trained dog, under the direction of the shepherd, they soon become entirely competent to the control of the flock. They perceive his wishes, by a word or sign, and with almost the speed of the greyhound, dart off to execute them. Accounts of their performances have been frequently related, which seem almost incredible to those unacquainted with their peculiar character. The following anecdote told by the Ettrick Shepherd will show their capacity more fully than any description:—

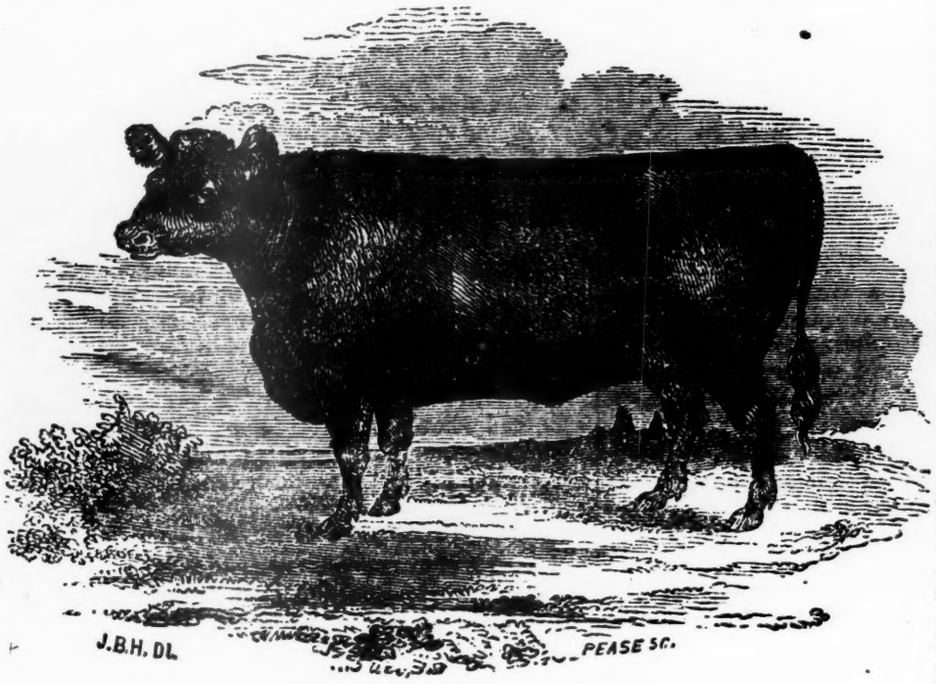
On one night, a large flock of lambs that were under the Ettrick Shepherd's care, frightened by something, scampered away in three different directions across the hills, in spite of all that he could do to keep them together. "Sirrah," said the shepherd, "they're a' awa!" It was too dark for the dog and his master to see each other at any considerable distance, but Sirrah understood him, and set off after the fugitives. The night passed on, and the shepherd and his assistant traversed every neighboring hill in anxious, but fruitless search for the lambs; but he could hear nothing of them nor of the dog, and he was returning to his master with the doleful intelligence that he had lost all his lambs. "On our way home, however," says he, "we discovered a lot of lambs at the bottom of a deep ravine called the Flesh Cleuch, and the indefatigable Sirrah standing in front of them, looking round for some relief, but still true to his charge. We concluded that it was one of the divisions which Sirrah had been unable to manage, until he came to that commanding situation. But what was our astonishment when we discovered that not one lamb of the flock was missing! How he had got all the divisions collected in the dark, is beyond my comprehension. The charge was left entirely to himself from midnight until the rising sun; and, if all the shepherds in the forest had been there to have assisted him, they could not have effected it with greater promptitude. All that I can say is, that I never felt so grateful to any creature under the sun as I did to my honest Sirrah that morning."

These dogs are quiet and good natured, never inclined to roam nor neglect their duties, and are as little disposed to injure the animals intrusted to their keeping. They have almost the intelligence of the shepherd in discerning the vagaries of the flock, and ten times his efficiency in driving it. No extensive sheep walks, unless closely hemmed in by impassable fences, should be without one or more of these useful guards.—*Allen's Domestic Animals.*

A Remarkable Cow.—Mr. John Nesbit, of Washington, Pa., informs us that he has a cow thirteen years old, that has brought forth *twenty-one calves*, at ten different births. At three births, she produced one calf at a time; at four births, two calves each time; at two births, three calves each time; and on the 23d of August last, she brought forth *four calves* at one birth, which are all doing well!

GALLOWAY CATTLE.

THE cut below represents a cow of the celebrated Scotch Highland or Galloway breed. This variety is generally of a black color, and without horns. It is considered among the most ancient breeds of Great Britain, and one of the hardiest, thriftiest, most docile, and most profitable. Many thousands are annually bred among the Highlands of Scotland, where they remain till two or three years old, and are then bought up by the drovers and driven to the richer pastures and milder climate of England. Here they usually remain from six months to a year, and are then taken to the London market. Their meat is considered the finest in England, and commands from half a cent to two cents more per pound than any other kind. They are acknowledged, upon the whole, to be the most profitable beast for the grazier and butcher that is reared and fattened in Great Britain. The cows give a moderate mess of rich milk.



THE GALLOWAY COW.—FIG. 21.

This breed has been greatly improved in Scotland within a few years past; and the finest and best of them are now little inferior in point of form to the celebrated Short Horns. Being of medium size, hardy, quick to mature, of fine points, and so superior for beef, we have often recommended them to our countrymen, as a highly valuable race to propagate in the colder latitudes, and among the hilly and mountainous districts of the United States. They can endure short pastures; and are so active, that they get about with greater ease than the larger sorts. We speak from our own knowledge, having often seen them in England, and conversed with the graziers and butchers respecting their merits, and in comparison with other breeds.

Polled or hornless cattle should be bred in remote districts in preference to any other, for the reason that they *are polled*. To grow horns, exhausts the soil more rapidly than growing flesh alone; and they are of but little value in comparison to their cost. Horned cattle are sometimes so dangerous to each other and to persons, as they move along the roads in large droves, that they have occasionally become objects of dread, and a public nuisance. Another serious objection to them, is, that they cannot be packed so close when transported in railroad cars and in water craft; and thus it costs more to get them to market.

We notice that Youatt, Lowe, and other British writers say; that attempts have been made to improve the Galloways by a cross of the Short-Horn bull without success. This positive assertion needs qualification. We were informed, when in England, that this was true only so far as regards the *larger* and *coarser* families of Short Horns; but where a *very fine-boned* bull of good points and *medium* size was resorted to for one cross, and the Galloways then bred back again, it was attended with marked success. By this means, the descendants had gained in symmetry of form and handling, and in earlier maturity; and lost nothing in hardiness nor in the superior quality their of beef. This cross, after the second generation, rarely showed a vestige of Short-Horn blood—except in superiority of form.

We know very few of the pure black Galloway breed in the United States. The only reason that they have not oftener been imported, is, that the Americans are prejudiced against their color. They do not like black, neither do they like white; but they like to make money, and yet their prejudices are so strong that the coveted dollar, thus far, has not been able to overcome them.

We take leave of the subject by quoting the following nursery rhymes, in which will be found as much sound sense as in the prejudices of Brother Jonathan :—

> "I do not like thee, Doctor Fell,
> The reason why I cannot tell—
> But this I know, I'm sure, full well,
> I *do not* like thee, Doctor Fell."

DANGER OF SLEEPING NEAR BURNING LIME KILNS.—During the process of lime burning, carbonate of lime is decomposed by means of heat, and carbonic acid driven off. Hence the fatal effects which have resulted from persons incautiously lying down to sleep near burning lime kilns.

ASPARAGUS BEDS.—Asparagus beds may be made four feet wide, trenched three feet deep, and liberally supplied with well decomposed farm-yard manure. Three rows may be planted in each bed, with the plants nine inches apart in the rows.

SEASONING AND PRESERVING TIMBER.

No. 1.

Experiments, in accordance with the testimony of history, prove that, if deprived of its sap or substances tending to organize, and excluded from the contact of moist air, all woody fibre may be preserved for an indefinite period. At a certain depth under water, too, it may be preserved indefinitely, as is proved by the durability of piles. But if not protected against the action of air and moisture, the particles of woody texture are gradually forced asunder, their bright colors fade, pass through various shades till they become jet black, and in process of time, the whole mass crumbles into atoms and final decay.

Numerous attempts have been made from the days of the Romans, to render wood impervious to rot, the ravages of insects, and the action of fire. Among these, the patents of Kyan, Margary, Boucherie, Burnett, and Payne, have succeeded in this object to some extent, by introducing various metallic oxides and alkalies into the cells of the wood, by means of exhaustion and pressure; but whoever will attentively examine a piece of timber with the microscope, will at once perceive, from the smallness of these cells, how difficult it would be to fill them with any fluid by the processes ordinarily employed. Previous to the inventions of Boucherie and Payne, the chief substances made use of for impregnating the timber, were expensive preparations of mercury and copper, which, on grounds of economy alone, would forever exclude them from general use. By Kyan's process, the timber is usually steeped in a solution of corrosive sublimate (bichloride of mercury), in upright tanks, the proportions of the ingredients recommended, being 1 lb. of the corrosive sublimate to 5 gallons of water; and it has been found by experiment, that a cubic foot of oak timber absorbs 3 pints of the liquid, which will usually require about three weeks.

The ingenious method adopted by Boucherie, was, to cut off the top and a portion of the branches of the tree, at the period of the rising of the sap, and then plunge the lower end of its trunk, cut close to the ground, into a basin or vat, containing a solution of pyrolignate of iron, or some coloring matter, which capillary attraction draws up into the cells of the wood in place of the sap—a process evidently limited in its application, and wholly unfitted for the preparation of any kind of timber, except for hoop poles or very small trees.

The chief merits of the more recent invention, in England, by Mr. Payne, consist in the combination and chemical action of different elements, producing a new substance, with new physical characters, which, it is stated, render the wood operated upon uninflammable, free from the ravages of insects, and entirely proof against dry rot. By this process, the timber is first placed in a vacuum, in a solution of sulphate of iron (copperas water), which is made to saturate it thoroughly by exhaustion and pressure. A similar operation is then followed with a solution of the muriate of lime, and within the pores of the wood there is thus created, by decomposition, an insoluble sulphate of iron. The principle acted upon by the inventor, was, that the source of the evil exists in the very nature and properties of the wood itself, and that a complete change must be effected in its structure by the diffusion of a substance capable of resisting external influences and arresting internal decay. By this process, it is computed, that, taking all expenses into estimation, the cost of preserving the sleepers of a mile of railway will not exceed $500. Each sleeper, it is stated, will absorb half a pound of copperas in solution, and an equal weight of the muriate of lime.

SOAK FOR SEEDS.

It was observed by Baron Humboldt, that simple metallic substances are unfavorable to the germination of plants, and that metallic oxides promote it in the exact ratio of their oxidation. Consequently, he was induced to seek some substance with which oxygen might be combined in such a manner as to facilitate its separation. In order to effect this, he made choice of *oxygenated muriatic acid gas*, in which he immersed some seeds of the common garden cress (pepper grass), which exhibited germs in the remarkably short period of *six hours;* whereas, when immersed in water alone, they did not germinate in less than thirty-two hours.

Another very successful and economical steep for garden or other seeds, consists of a solution of a *quarter of an ounce* of chloride of lime to *one gallon* of water, in which the seeds should be allowed to soak for the space of *four hours*, and then be sown in the ordinary way. It is stated, on good authority, that corn and peas, treated in this manner, have been known to throw out germs *one and a half inches* in *twenty-four hours;* and in *forty-eight hours*, to acquire roots more than double that length.

The latter experiment may be tested, at a trifling cost, and should it succeed, as stated above, the germination, or coming up of many seeds, may be accelerated at least a week or ten days.

FINE-WOOLED SHEEP AT THE WEST.

Mr. Nathaniel Sawyer, of Cincinnati, Ohio, writes us, that he exhibited six bucks and six ewes of his flock, at the show of the New York State Agricultural Society, at Saratoga last September, and obtained a premium upon them. His flock is what is called the Guadaloupe variety, and came originally from New Hampshire. He considers it a pure flock of Merinos.

Mr. Sawyer has a flock of about 1,200 on the praries, 25 miles west of Columbus, Ohio. He says his sheep are as healthy there as in any part of the Union. The only thing he fears is *dogs*. We trust the Legislature of Ohio, at their present sitting, will have the good sense to pass a law to tax dogs for the benefit of the flock masters of their state. Several thousand sheep are annually killed by worthless curs, kept for no purpose, but to gratify miserable loafers and reckless sportsmen.

We are familiar with the country Mr. S. speaks of, and a more eligible one for sheep and general farming purposes it would be difficult to find.

How to Make a Durable Whitewash.—Take a peck of quicklime and slake in hot water; add, while hot, 6 lbs. of lard or any common grease, 2 lbs. of Spanish whiting, and 3 gills of salt. Stir the mixture well and apply it while hot. Rain nor dampness, it is said, will not darken its color for a great length of time.

NEW YORK STATE AGRICULTURAL SOCIETY.

THE Annual Meeting of this Society was held at Albany the third week in January.

George Vail, Esq. in the chair.

Mr. B. P. Johnson, Secretary, read the report of the Executive Committee, which was agreed to, on motion of Mr. McCarthy, of Oswego.

Mr. J. McD. McIntyre, Treasurer, presented his annual report, which shows the receipts and expenditures to have been for the past year as follows :—

Balance from last report, and receipts from various sources during the year, . . . $6,457.19

DISBURSEMENTS.

Premiums paid, ...	$2,226.73	
Incidental expenses, . . .	514.78	
Library, ...	61.22	
Salaries, ...	947.27	
Expenses, 1846, ...	312.88	
Other expenses, ...	547.75	
Invested 1st Oct. last, . .	1,000.00	
		5,650.63
Balance on hand, ...		806.56
		$6,457.19

The President stated that the permanent fund of the society amounts to $8,000.

Mr. T. Smith, of Schoharie, moved the appointment of a committee for the selection of officers of the society for the next year, and to recommend the place of holding the next Annual Fair, upon which said committee was appointed, and the following list of officers nominated, and unanimously elected.

For President, Lewis F. Allen, of Erie county.

For Vice President, 1st District, Ambrose Stevens, of New York.

2d District, John A. King, of Queen's.
3d " E. P. Prentice, of Albany.
4th " Samuel Cheever, of Saratoga.
5th " Geo. Geddes, of Onondaga.
6th " Geo. W. Buck, of Chemung.
7th " Allen Ayrault, of Livingston.
8th " James C. Ferris, of Wyoming.

Recording Secretary, Benj. P. Johnson, of Albany.

Corresponding Secretary, Ebenezer Emmons, of Albany.

Treasurer, John McD. McIntyre, of Albany.

Executive Committee, Luther Tucker, of Albany; John J. Viele, of Rensselaer; Joel Rathbone, of Albany; Theodore C. Peters, of Genesee; Hon. John T. Bush, of Erie.

Mr. Allen, President elect, then assumed the chair, and made the following address :—

GENTLEMEN,—In accepting the distinguished honor which your partiality has conferred upon me, I should be recreant to a feeling of proper sensibility not to offer to you my unfeigned acknowledgments upon this occasion. Were the Society constituted of an assemblage of individuals for secular or conventional purposes, applicable only to the usual routine of public affairs, the selection of any one of its members to preside over its deliberations, might well be esteemed an honor; but with the high purposes which you have in view, the magnitude of the interests you represent, and the results which our labors, under the Divine blessing, are destined to accomplish, render the position of its presiding officer one of marked importance, and of no ordinary responsibility; and particularly when I reflect upon the names which have so worthily preceded me in the discharge of the duties which I have now undertaken, I may well doubt my own ability to perform satisfactorily to you my appropriate duties.

The New York State Agricultural Society, gentlemen, is among the new creations of the age, called into existence by the increased inquiry after intelligence, of the most numerous and most substantial class of our population—the farmers of the state. It is not a body of amateurs in science or the arts, who come together to hold polite disquisitions which may or may not have to do with the tastes and the partialities of the world, or of society; but we claim to be earnest men, representing the interests of the mass of our population, whose substantial welfare we consult; and in our labors to promote their prosperity, we seek also to add to their enjoyments by blending with the strictly useful, incidentally, that which shall both elevate and refine.

This society is rapidly building up a character for investigation and intelligence which is already honored at home and inviting respect abroad. It has been ranked among the honorable and distinguished institutions of our country, and under wise influences it may achieve results which generations yet unborn shall rise up and call blessed.

From long association with you, gentlemen, I shall, in the discharge of whatever duties I may be called to perform, be conscious that I am acting with old friends and zealous co-laborers in a cherished cause; and in expressing to you an unfeigned distrust of my ability to perform those duties to you satisfactorily, I will not so far indicate a doubt of your kind indulgence as to ask it for the unintentional errors I may commit; for I know that indulgence is already extended in advance. I can, in conclusion, only assure you that whatever ability I possess shall be devoted to your service; and I trust so to act, that, on retiring from office, my record may not remain unmarked upon the annals of the society.

Prof. J. P. Norton, of Yale College, delivered an address, before the society, and many gentlemen of high standing, from various parts of the state, and the students of the Normal School, combining much useful scientific information, with very happy illustrations of the adaptation of the results of science to the cultivation of the soil. The Professor was listened to with the utmost attention; and at the conclusion of his address,

Mr. John A. King, of Queen's Co., moved that the thanks of the society be tendered to Professor Norton for his excellent and scientific address, and that a copy be requested for publication. Agreed to.

Mr. Geo. W. Clinton presented a memorial of the Common Council of Buffalo, asking that the next Annual Fair may be held in that city. The citizens of Buffalo had waited a long while for the society to gratify them by fixing upon that place as the site of holding the fair; and they believed that the fullness of time had now come. The memorial which he presented was but the echo of the sentiment of all classes of people in that city. A large region of fine country would be greatly benefitted by the holding of the fair at Buffalo, and he would assure

the society that they, and the visitors at the fair, would receive a cordial western welcome.

Mr. T. Smith laid on the table a resolution that it would be judicious for the society to fix a permanent central locality as the place of holding all the annual fairs, after the next.

Mr. B. F. Angel reported that the committee to fix a place for holding the next Annual Fair had unanimously concluded to recommend that it be held at the city of Buffalo.

Mr. L. F. Allen, from the Committee on Fruits, reported a list of pears, plums, cherries, and strawberries, which said committee recommended for cultivation. This was a report in part, and Mr. A. regarding this as an important subject, moved that the committee be continued. Agreed to.

Pears, Summer.—Bloodgood, Madeline, Dearborn Seedling. *Autumn.*—Fondante d'Automne, Bartlett, Seckel, White Doyenné, Swan's Orange or Onondaga, Stevens' Genesee, Louise Bonne de Jersey, Beurré Bosc, Grey Doyenné, Washington. *Winter.*—Beurré d'Aremberg, Glout Morceau, Winter Nelis, Vicar of Winkfield.

Plums.—Jefferson, Schenectady Catherine, Reine Claude, Columbia, Huling's Superb, Bleecker's Gage, Albany Beauty, Washington Bolmar, Prince's Imperial Gage, Coe's Golden Drop, Denniston's Red, Prune d'Agen, Peach Plum, Lawrence's Favorite.

Cherries.—Mayduke, Florence, Black Tartarian, Yellow Spanish, Holland Bigarreau, Downer's Late, Elton.

Peaches.—Early Tillotson, George IV, Grosse Mignonne, Morris White, Royal George, Yellow Rareripe, Crawford's Early, Red Rareripe, Red-Cheek Malacoton, Cooledge's Favorite, Malta [?], Breevoort's Morris.

Strawberries.—Early Scarlet, Hovey's Seedling, Swainstone Seedling.

Grapes.—Isabella and Catawba.

The following is a list of the premiums awarded by the society :—

FARMS.

1st premium to John Delafield, Oakland Farm, Seneca Co., $50.

2d, Peter Crispel, Jr., Hurley, Ulster Co., $30.

3d, James Pendil, Batavia, Genesee Co., $20.

4th, L. V. V. Schuyler, Watervliet, set of Transactions.

DRAINING.

1. A. D. Spoor, Troy, Rensselaer Co., $10.

2. E. J. Woolsey, L. Island, set of Transactions.

3. E. C. Bliss, Westfield, Chautauque Co., Transactions, 1846.

DESIGNS FOR FARM BUILDINGS.

Farm House.—Mrs. Sanford Howard, Albany, $20.

Piggery.—S. W. Jewett, Weybridge, Vt., $10.

CHEESE DAIRIES.

Alonzo L. Fisk, Cedarville, Herkimer Co., statements of management of dairy, $50.

Newbury Bronson, Warsaw, Wyoming, Co., $20.

BUTTER DAIRIES.

Benj. A. Hall, New Lebanon, Columbia Co., $50.

FIELD CROPS.

Indian Corn.—Geo. Vail, Troy (2 acres, 67 bushels per acre), $20.

Spring Wheat.—Robert Eells, Westmoreland, Orange Co. (2 acres, 20½ bushels per acre), $8.

Barley.—Benj. Enos, De Ruyter, Madison Co. (2 acres, 39 bushels per acre), $10. E. C. Bliss had not sufficient land for premium.

Oats.—Charles W. Eells, Kirkland, Oneida Co. (2 acres, 85¾ bushels per acre), $10. Benj. Enos, De Ruyter, Madison Co. (71 bushels per acre), $8.

Beans.—E. C. Bliss, Westfield, Chautauque Co. (31¼ bushels per acre), $8.

Flax.—Wm. Newcomb, Pittstown, Rensselaer Co. (half acre), $5.

ROOT CROPS.

Potatoes.—Daniel Newcomb, Pittstown, Rensselaer county (1 acre, 405 bushels), $10.

Martin Springer, Brunswick, Rensselaer county (360 bushels), $8.

Ruta Bagas.—Joseph Hastings, Brunswick (1 acre, 1,317 bushels), $10.

Carrots.—Wm. Risley, Fredonia, Chautauque county (half acre, 557 bushels), $8.

EXPERIMENTS.

W. D. Osborn, Port Byron, Cayuga county, on three acres planted with corn last year. 1st acre manured with ten cords barn-yard manure last year—oats this year, 90¾ bushels. 2d acre—corn last year, without manure; oats this year, 88½ bushels. 3d acre—corn last year, manured with eight cords, 112 bushels. Premium $20.

FRUITS.

Charles Lee, Penn Yan, Yates county, 2d premium for the seedling winter apple, "Waggener Apple," $5.

The committee also remarked that, two seedling winter apples were presented; one called the "Middle Apple," from Herkimer, Herkimer county, and the other from the seed of the "Newtown Pippin," in Albany county, without a name; but as no description of the growth and habits of the trees was given, they postponed a decision upon them and request that the producers send in the characters and history of the trees.

After the announcement of the premiums,

Mr. Vail, in retiring from the presidency, delivered an address, which presented a very favorable view of the condition of the society, and detailed, in a highly interesting manner, the transactions of the past year.

Dr. Beekman moved that the thanks of the society be tendered to Mr. Vail, for his very able and interesting address, and that a copy be requested for publication. Agreed to.

Mr. Allen laid on the table the following preamble and resolution, to be called up for subsequent discussion :—

Whereas, the Congress of the United States has established an institution for the promotion of knowledge, at the city of Washington, called the "Smithsonian Institute," founded on a bequest for that purpose to the nation : *And, whereas* agriculture being the chief pursuit of the American people, in which at least four fifths of our population are engaged;

and for the most intelligent understanding of its principles, and its successful prosecution, a thorough education is necessary; therefore

Resolved, That a committee of this society be appointed to take into consideration the expediency of appropriating a portion of the patronage of the Smithsonian Institute for agricultural purposes; and also to inquire into the propriety of recommending the purchase by Congress of the Washington estate at Mt. Vernon as the site of an institute for the promotion of agricultural education.

Mr. Nathan Burchard, offered the following resolutions:—

Resolved, That a complete and liberal system of agricultural education will enable the farmer to enhance the value of his landed property, and give him the knowledge to improve the same, and change the various modes of culture.

Resolved, That science applied to agriculture should hold a prominent place in all our seats of learning; and that a properly organized and well-directed agricultural school, embracing a model and experimental farm, would conduce to the elevation and instruction among the industrial classes.

Resolved, That the time has arrived for the establishment of such a system of education; and the object is every way worthy of private and legislative approval.

Mr. Geo. E. Sickles, of New York, seconded the resolutions, and supported them in an effective speech.

Mr. Viele said this was no new thing in the discussions before the society. It had been here before, and the same principle urged upon the community interested in agriculture. He was glad to see that the society still persisted in presenting it. The resolutions, however, proposed no action, and merely expressed an opinion in favor of agricultural schools. The society had applied year after year, to the Legislature, without success; but he hoped that the object would not be allowed to fail for want of the continued exertions of its friends and advocates. Importunity might have its effect, if all else was insufficient; and the Legislature might finally grant our petition from the same reason the young lady gave for consenting to marry—she married her lover just to get rid of him. [A laugh].

Mr. Burrett, of Onondaga, further advocated the resolutions, and expressed the belief that the time had nearly arrived when the wishes of the agricultural community would be gratified by the establishment of the long-sought agricultural school.

The above resolutions were unanimously adopted.

REMEDY FOR A SCALD OR BURN.—Scrape, or grate a raw potato and apply the pulp, as a poultice, to the scald or burn. When dry, repeat the operation until the smarting shall cease. If the skin be broken, the sore may be healed with basilicon salve, or merely by binding on some dry lint, covered with a linen rag burnt brown. Should the part affected be very bad, it may be washed with alum whey; but the operation of the potato poultice is so effectual, that the burn seldom causes an after break in the skin.

MARL, it is believed, will last longer in the ground than any other manure.

WOOL GROWING IN TEXAS.

About five years ago I commenced wool growing with twelve Mexican ewes and one buck, one third Merino, and now my flock numbers between two and three hundred, having sold, about fifty head, mostly wethers. Although sheep do very well here in obtaining their entire living from the pastures, yet I feed my ewes through the winter, in consequence of which, I think they do better, and produce finer wool and stronger lambs.

As there is but little demand for wool in this state, I would like to be informed, through the columns of the Agriculturist, the best mode of managing and putting it up for a northern market. Should it be washed? Should it be assorted and each class be put up by itself? And may it be packed up in bales like cotton? An answer to these inquiries will be duly appreciated and thankfully received. SHUBAEL MARSH.

Independence, Texas,
December 20th, 1847.

In answer to the above, we would refer our correspondent to an article on "Sheep Husbandry in Spain," at p. 148, of our fourth volume; also, to the mode of preparing wool for market, recommended at the convention of wool growers, held at Steubenville, Ohio, on the 10th of February, 1847, an account of which will be found at p. 169, of our sixth volume. (See p. 78 of this number).

Wool, previous to packing, should be thoroughly dried, after which, it matters not whether it be put up in canvass bags in parcels of 200 lbs., or whether it be pressed in bales of 500 lbs., like cotton. Perfect dryness, in either case, is indispensable; otherwise the wool will become heated, ferment, and consequently spoil.

THE RULES OF POMOLOGY.

At the late Annual Meeting of the New York State Agricultural Society, the following Rules of Pomology were recommended and adopted for the guidance of the Fruit Committee:—

Rule 1st.—No new seedling fruit shall be entitled to a name, or to pomological recommendation, which is not at least equal to any similar varieties of the first rank already known; or which, if of second-rate flavor, is so decidedly superior in vigor, hardiness or productiveness to varieties of the same character already known; or which may be found of such superior excellence, in particular regions, as to render it well worthy of cultivation.

Rule 2d.—The discoverer, originator, or he who first makes known a new native variety of merit, shall be at liberty to name it, which name, if appropriate, and coming within the rules of nomenclature, shall be adopted by the writer, describing the fruit for the first time; but no new fruit can be considered as definitely named until the same has been accurately described in pomological terms by the fruit committee of some state agricultural or established horticultural society, or by some pomologist of reputation conversant with existing varieties, or until such description shall have been published in at least one horticultural or one agricultural journal, or some pomological work of acknowledged standard character:

and when two persons have named or described a new variety, then the name first published, if consistent with the above, shall be the name of the fruit.

Rule 3d.—The description shall embrace the following particulars:—The size, form, and exterior color; the texture and color of the flesh; the flavor and time of ripening of the fruit, with the addition in stone fruits of the size of the stone, adherence or non-adherence of the flesh, form of the suture, and the hollow of the stem; and in kernel fruits the size of the core and seeds, the length, position, and insertion of the stalk, and form of the eye. In peaches, the form of the leaf glands, and size of the blossoms. In grapes, the form of the branches; and in strawberries the character of the blossoms, whether staminate or pistillate; and also where there is any marked character in the foliage, growth of the young wood, or bearing tree, the same shall be given.

Rule 4th.—In giving names to newly-originated varieties, those in some way descriptive of the qualities, origin, or habit of fruit or tree, or those which commemorate a particular place or person, shall be preferred. All harsh or inelegant names must be avoided, and unless the originator's name be added, no name must be given which consists of more than two words, and no fruit introduced from abroad shall be re-named.

Rule 5th.—Before giving a name to a new fruit, its qualities should be decided by at least two seasons' experience, and no new fruit can be safely recommended for general cultivation until the same has been tested and found valuable in more than one locality.

The above rules of pomology, as adopted by the State Society, we think more just and equitable than any others which have before been published. By these rules, it will be perceived that no paper, however extensive in its circulation, nor any particular writer can monopolize the naming of fruits, as already has been attempted to be done, in one or more instances, well known to the public.

GARDEN FORKS.

THESE implements are preferred by many to the spade, even for digging open beds; for the compartments or ground can be turned over by them quite as easy, with less labor, and the pulverization of the soil will be more complete. For stirring the earth in plantations, shrubberies, fruit borders, &c., a three pronged fork is often employed, but one with four prongs is no less objectionable, as it will more thoroughly divide the particles of the soil. Price from $1 to $2 each.

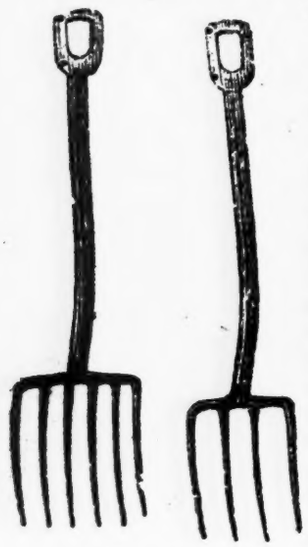


FIG. 22.

MANURE FORKS.—The best forks for handling manure, are those manufactured by Messrs. Partridge and Hopkins. These are cut out of plates of cast steel, and have from four to ten tines each. They are strong, quite elastic, and if properly used, will endure for a long time. Prices from $2 to $5, or 50 cents a tine. We have other manure forks from 75 cents to $1.50 each.

MANAGEMENT OF HONEY BEES—No. 17.

Bee Pasturage.—There is a mistaken opinion prevalent with those who are not familiar with the honey bee, that those locations, where numerous flower gardens may be found, adorned with all the rich and rare varieties of flowering shrubs, roses, &c., are the most suitable for the prosperity of bees; but this is a great mistake. Flower gardens, in general, have but few attractions, for the honey bee, their great harvest being in the fields, where the flowers of nature invite them to an exhaustless banquet.

The common white, or Dutch clover (*Trifolium repens*), that we often see spread on the road side, and in the fields, with a profusion that calls forth our admiration, is the *chief* resource of the honey bee; and I think I may truly say, that without the spontaneous growth of this clover, in the vicinity of the apiary, prosperity and success, in keeping bees, is out of the question, unless crops are sown expressly for their benefit of some kind. This white clover may be sown to advantage, in such cases, or buckwheat would do as well, except the quality of the honey from buckwheat is very inferior to that from clover; indeed, there is nothing in this country that yields so pure, so white, and so delicious honey as the above-named clover. Any person wishing to try his hand at keeping bees, should ascertain whether said clover grows spontaneously around his residence in profusion; and if so, he has nothing to fear, with tolerable management. The distance that bees go in quest of honey, I think may be fairly set down to a circumference of *two* miles from the apiary; and if a full supply of honey can be had within *one* mile, they will rarely pass such limits. If no honey should be found short of *two* miles from the apiary, it is probable, that the bees would die of starvation before they would generally pass those limits. I have fully proved the distance, that my bees roamed, during the last reason. No one else in a certain direction kept bees, and seeing my bees dart off in that direction, in great numbers, I examined the fields when white with clover blossoms, and I found the bees very thick, within a mile, and very few beyond that space.

The Dutch clover flowers early in June, and continues till August. This season, is the only time in the year that bees can lay up a surplus of honey, and a single day, at this period, is of more real importance to bees, in this respect, than a month before or after; hence, it follows, that if we have much unpleasant weather during this season, of gathering, the bees cannot do well, and therefore they should not be blamed. If we will but notice, with what eagerness the bees rush to and fro, during this important period, to "make hay while the sun shines," we might well profit from the example.

The *willow* as an early spring resource, affords

much honey when it can be had from no other tree, or from any flower of the field. Then follows the peach blossom; next the cherry; then the apple and pear blossoms; all affording a large supply of excellent honey; and if you have raspberries in your garden, you may expect to see the bees upon every flower; but your peonies, roses, and all your much-admired flowers, with very few exceptions, the bees will never condescend to visit.

Red clover, which covers the fields so luxuriantly, and which would appear to be a fine crop for affording honey, is as useless to honey bees, as so many thistle heads; for the reason that the proboscis of this insect, is too short to admit of extracting the honey from its blossoms.

There are many trees in the forest, or in the grove, that afford honey, either from flowers or from the substance termed "honey dew," that exudes from the leaves. I was once passing through a natural grove of trees, near my residence, in the month of August, and I heard a noise like the faint notes of distant music, and looking up, I saw bees in endless numbers, among the branches of a tall tree (of what species I do not now recollect), and their merry "Te Deum" gave conclusive evidence of the presence of honey in abundance.

As a fall supply, when the season has been unfavorable for gathering honey, there is nothing that can compare with buckwheat, and this crop should be sown near every apiary, for the two-fold crop of grain and honey.

I simply give the principal sources of the bee, for its supply of honey. There are many other things of value to them, too tedious to mention.

As a source for gathering *farina*, the *sunflower* is highly important. Farina is as requisite to the young brood as honey, and this must be stored up in advance, and a row of sunflowers, along side of your field, or garden fence, would be worth, to the bees, ten times the trouble of planting. Try it, and see for yourselves, how the bees will roll up the yellow dust from the golden heads, and stick it upon their thighs, and carry it to their hives.

T. B. MINER.

Ravenswood, L. I.
February, 1st, 1848.

POLE PRUNING SHEARS.

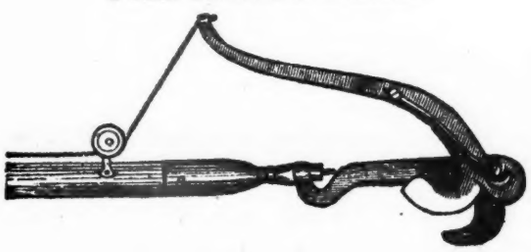


FIG. 23.

THIS implement is attached to a pole, and operates by means of a lever moved by a cord and pulley. Its use is to enable a person, standing on the ground, to prune trees, some of the branches of which may not, perhaps, be so well trimmed by any other implement. Branches of one inch and a half in diameter may be easily cut off with this instrument. Shears of this kind, of small size, are also very useful in cutting off from shade and fruit trees, small branches to which insects have attached themselves. Prices, $3 to $4.50.

LOPPING OR BRANCH SHEARS.—These shears

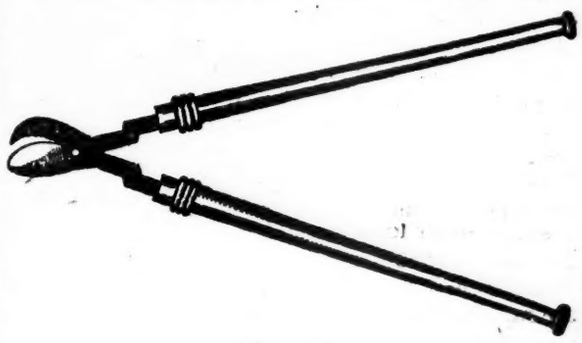


FIG. 24.

are very strongly made, with long wooden handles, and are used for cutting thick branches from trees, shrubbery, hedges, &c. Prices, $2.25 to $5.

LETTERS FROM VIRGINIA.—No. 4.

SINCE writing to you last, I have penetrated as far south as Richmond, and am more and more impressed with the advantages which are here presented, not only to the agriculturist, but to the manufacturer and the trader. The natural resources of this fine country are absolutely inexhaustible. Her mines of coal, iron, copper, and even of gold and silver, afford the strongest inducements to the enterprising artisan. And the vast amount of unappropriated water power, which is everywhere to be found, is amply sufficient to set in motion machinery adequate to the supply of a continent. There are hundreds of thousands of acres of valuable land constantly in market and procurable for the merest trifle, for no other reason than that its owners neither have nor can procure the requisite amount of force to put it under cultivation. Every acre of this land, if it were subdivided into farms of fifty to a hundred acres, and subjected, for a single season to a scientific and judicious process of agriculture, might not only be quadrupled in its nominal value, but rendered equally productive with the richest soils of New England or New York. This may be thought the language of exaggeration; but I am abundantly supported in the conclusions I have drawn, by the most experienced and competent judges; and by facts which speak for themselves. There are numerous farms in the poorest sections of the state, where the land has been purchased at from $3 to $5 per acre, upon which, in less than two years, crops of wheat averaging from 12 to 14 bushels per acre and of corn averaging from 40 to 50 bushels, and other crops in proportion have been secured.

Too much stress it seems to me, cannot be laid upon the advantages of the climate in reference to the breeding and rearing of stock. It is now the first of February, and cattle have not been confined to the barn yard a single week. Nor have they consumed half a ton of hay each. In the severest seasons, two months, from the middle of January to the middle of March, is all the "soiling" they need; and during a very large portion even of this time, they get good picking in the pastures for several hours of each day.

The facilities for sheep husbandry here are *unequalled* on the continent. [This was General Washington's opinion. Ed.] The vast mountain ridges extending through the centre of the state, and the high lands generally, are admirably adapted to this branch of husbandry; and the very able letters of Col. H. S. Randall, of Cortland county, in your state, published in the Farmers' Library, are opening the eyes of hundreds in this region to the advantages they possess in this respect. Large flocks of sheep are already being introduced into many portions of the state, where they have hitherto been systematically excluded; and the unreasonable and pertinacious prejudices of many, handed down as heir looms, from generation to generation, are rapidly disappearing before the evidence of facts and the irresistible array of sound reasoning, brought to bear upon the subject by the accomplished intelligent writer to whom I have alluded. I must, however, in this connection, do you the justice to say, that a series of discussions carried on several years since in your paper on this point, first directed the attention of some of our ablest agriculturists to this department, and elicited an array of facts and arguments which have led to practical results of the greatest value and importance.

While at Richmond, I formed some very valuable acquaintances, especially among the members of the Legislature then in session; and was enabled to ascertain their views upon many points of interest to your northern readers. In conversation with several of the most intelligent and influential gentlemen of that body, I gathered the impression that the immigration of northern settlers into different sections of the state, was regarded with the liveliest interest and approbation; that there was great anxiety and solicitude on the part of the citizens generally, to display to their more enterprising northern brethren the varied resources and capabilities of the state, and to enlist their active co-operation in their development, together with an earnest desire to remove every obstacle to their purchase and settlement here: that the *substitution of free for slave labor would be hailed with unfeigned satisfaction;* and that the most effectual and practicable mode of getting eventually rid of the latter, altogether, would be through the former—a consummation, as I firmly believe most devoutedly desired by a large majority of the people of the state. I was informed by the proprietor of a large manufacturing establishment, and a most estimable, enlightened, and influential man, that so deeply was he impressed with the importance of the agency here alluded to, for the improvement and regeneration of the state, in its industrial capacity, that he had already *given* to northern manufacturers the use of large portions of his machinery for a series of years, with the right of eventual purchase on the most liberal terms, accompanied with a stipulation on both parts of the entire prohibition of slave labor on the premises—and that he was prepared and desirous to extend these privileges to the utmost of his ability. He is the part owner and agent of a large tract of valuable land near the great falls of the Potomac, at South Lowell, where there is an extent of water power, unequalled, as I believe, in the Union, and which he is desirous of disposing of, on these terms.

I trust the day is not far distant when the north and the south will know each other better than they now do. I can, at all events, assure our northern friends, that they will not only be heartily welcomed here, but enabled, by the exercise of ordinary industry and a judicious investment of their pecuniary means, to realize, in a very brief period of time, a handsome fortune. Whatever prejudices may exist on their part, in reference to southern institutions and southern modes of labor and of life, they may rest assured, no prejudices are entertained here against them; and that a nearer view and a closer intimacy with their brethren of the south will not fail to dispel their most formidable apprehensions and to draw still more firmly the common bond of union which encircles the citizens of our broad and fair republic. A New-Yorker.

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We especially commend the preceding letter to the perusal of our northern readers. We have long been convinced that it would be more advantageous for our people to emigrate to the southern Atlantic, rather than to the western states. The climate is milder and healthier in all those sections which are sufficiently removed from the miasma of the rich river bottoms. Then there are the advantages in a great measure of an old-settled country, such as cheap, good land, already long under cultivation; tolerable good roads, churches, schools, villages, mechanics near by, &c. But we will not anticipate our excellent correspondent, who is much more capable than we are to give all proper information. Virginia is a noble state, possessing greater resources and more natural advantages, than any other in the Union; and whenever her name is mentioned, it stirs up an ardent desire on our part to see her develop those great resources, and take the same pre-eminent stand in population, wealth, and morals, that she ever has in the government and politics of the nation.

THE WANTS AND DISEASES OF POULTRY.

Having suffered much lately through ignorance and inattention in the management of poultry, I am now forced to confess that I never knew before the practical importance of acquiring information on this subject, trifling as it may appear. I maintain, that every farmer's wife, son, and daughter, in the land, should study the habits and make themselves familiar with the every-day wants of our common dung-hill fowls, which will be obvious by reading what I am now about to relate.

Sometime since, I received from New York, some Dorking and Poland fowls, which I immediately unboxed and gave their liberty. Being curious to know how they would behave when let out, I provided them with a quantity of water, corn, fresh meat, green grass and cabbage, clam shells broken into small peices, and some old mortar of a wall, pounded fine, in order that I might know in future something of their wants. The first things they sought were the pieces of broken clam shells and the pounded mortar of the wall. The fresh water they were so anxious to obtain, as almost to dive into it, body and all. The finely-chopped meat they devoured greedily, and did ample justice to the green food. Thus we may learn that the wants of barn-door

fowls, like those of other farm stock and even those of the whole human race, are somewhat varied. (*a*)

Notwithstanding I provided everything in my power that I thought would contribute to their comfort and health, my Dorkings were soon affected with a disease, the like of which I had never seen before. I immediately referred to several publications on the diseases of animals, &c., from which I gathered enough to suppose that the malady might be the *gapes;* for they are continually gaping, with a kind of hiccough or catch, in the throat, when they attempt to make a noise; their eyes and nostrils are constantly running; in some instances their eyes are so swollen as to be quite closed up; and they appear to have no disposition to eat, but are rather inclined to droop. (*b*)

At first, I tried to free their windpipes of any obstruction by the use of the feather end of a quill, dipped in spirits of turpentine, but with no effect. I then made some pills of powdered charcoal, lard, and Cayenne pepper, with no regard as to proportions, but when mixed, of about the consistency of putty. The size of the pills was as large as the throat of a hen is capable of receiving, three of them being a dose for each fowl a day. This *indefinite* prescription, I met with, in a book by S. W. Coles, entitled the "American Veterinarian," which compels me thus openly to disclaim against the almost universal want of *definiteness* in some writers. Too much is left to be taken for granted, and is sent forth to the world as a mere skeleton, leaving the reader to fill it out as best suits his fancy.

While doctoring my fowls, I had a call from a real farmer's "gude wife," to whom I mentioned this disease, and inquired whether she had ever seen or heard of it before. She said, "Indeed I have, and scores of chickens have I lost by it; but I know not what to do for it—neither do I know the cause."

It may be interesting to add, that I have been feeding all my fowls for some time past on mouldy corn; and that I saw nothing of the disease before the arrival of the Dorkings; but at present, my Polands and other breeds are afflicted in the same way. I have now changed their feed, giving them Indian meal, mixed in hot water, with a tea-spoonful of salt to each quart. As to the success of this treatment, time alone will determine.

Another disease, with which a few of my Dorkings are afflicted, is here called the "big knee." I had never heard of this complaint before, and consequently had known of no cure. I applied, however, some liquid opodeldoc to the affected parts, and I think the fowls are gaining upon the disease.

Any light that can be given on this interesting subject by some of your generous correspondents, will be considered of great importance to our Jersey farmers, by whom and myself, it will be gratefully received. W. D.

Morristown, N. J., Dec. 16th, 1847.

(*a*) The wants of poultry are very clearly shown by a correspondent of the Boston Medical and Surgical Journal, in the following amusing sketch:—

"A most pleasing illustration," says he, "of the want of lime, and the effects of its presence, came under my notice on my voyage from South America to 'sunny France.' We had omitted to procure gravel for our poultry, and in a few days after we were at sea the poultry began to droop, and wound up their afflictions with the pip, or as the sailors term it, the scurvy. Their feathers fell from their bodies, and it was perfectly ludicrous to see the numerous *un*feathery tribe in the most profound misery, moping away their time in an utter state of nudity. Amusing myself one day, by fishing up gulph weed, which floated in immense fields upon the surface of the ocean, I shook from it numerous small crabs, about the size of a pea. The poultry, with one accord, aroused themselves from their torpor and seemingly, as if by instinct, aware of the therapeutic qualities of these interesting animals, partook of them with greater avidity than any invalid ever swallowed the 'waters' of the 'springs.' After a few hours the excellence of the remedy was apparent; the roosters began to crow, the hens to strut and look saucy, and in a few days all appeared in quite a holiday suit of feathers, derived from the lime, the constituent part of the crab shells."

(*b*) By referring to p. 222, of Allen's "Domestic Animals," our correspondent will perceive that his fowls were affected with the *roup*, *catarrh*, or *swelled head*, where, it is stated that the disease "is shown by feverish symptoms, swollen eyelids, frequently terminating in blindness, rattling in the throat, and temporary strangulation. These are accompanied with a highly offensive watery discharge, from the mouth and nostrils, loss of appetite, and much thirst. They should be placed near the fire; their heads bathed in warm Castile soapsuds, or milk and water. Stimulating food, as flour or barley meal, mustard and grated ginger, mixed and forced down the throats, Boswell says, has been effectual in their speedy restoration. This, like many other diseases, is contagious, and when it appears, the bird should be at once separated from the flock."

PHILOSOPHY OF FARMING.—Here is the secret of good farming. You cannot take from the land more than you restore to it, in some shape or other, without ruining it, and so destroying your capital. Different soils may require different modes of treatment and cropping, but in every variety of soil these are the golden rules to attend to: Drain until you find that the water that falls from heaven does not stagnate in the soil but runs through it and off it freely. Turn up and till the land until your foot sinks into a loose, powdery loam, that the sun and air readily pass through. Let no weed occupy the place where a useful plant could possibly grow. Collect every particle of manure that you can, whether liquid or solid. Let nothing on the farm go to waste. Put in your crops in that course which experience has shown to lead to success in their growth, and to an enrichment and not impoverishment of the land. Give every plant room to spread its roots in the soil, and its leaves in the air

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EFFECTS OF CULTIVATION.—Buffon asserts that wheat is a factitious grain, and that there is scarcely a vegetable, whatever its present character on our farms, that can be found growing naturally. Rye, rice, barley, and even oats, cannot be found wild; that is to say, growing naturally, in their present perfect state, in any part of the world.

Ladies' Department.

THE EFFECTS OF COSMETICS ON THE SKIN.

THE deep interest I take in the moral improvement of my young countrywomen, more particularly those who are so fortunate as to be the wives and daughters of farmers, must be my apology for the following remarks upon the article in the January number of the Agriculturist on the "Effects of Cosmetics on the Skin." I shall therefore ask no other excuse for expressing my difference of opinion, nor for pointing out what I conceive to be mistaken views on the subject, feeling very sure that a little serious reflection will bring your correspondent over to my old-fashioned way of thinking. Let me first say, however, that I agree entirely with her observations on the different kinds of soap, alcoholic preparations, &c.

We know that all kinds of soap are more or less injurious to a delicate skin, and in cold weather their too frequent use should be dispensed with, as much as possible; but when necessary, the skin should be protected afterwards, for a little while, from the air. Therefore, when cleanliness requires it for the face and neck, they should be washed just before retiring at night; and in the morning, nothing more will be wanted than the usual sponge bath of pure, cold, soft water, and a coarse rubber vigorously applied. Some skins will chap under the most careful treatment that can be bestowed upon them; while others will continue soft and smooth, though exposed to every wind that blows, and seem to be proof against all kinds of domestic labor. For the first of these, the best purifier would be corn, or bean meal, or palm-oil soap, followed by a few drops of honey rubbed on while the hands are wet. Fine dry salt acts very pleasantly on the skin; rendering it soft and smooth, and has also the advantage of strengthening the system, on which account it is often highly recommended by physicians. The best way to apply it, is, to draw on a pair of very coarse cotton or linen knitted gloves, that have been frequently dipped in strong salt and water, and dried after each immersion, and with them rub until the skin looks red, and the blood circulates freely.

But it is the second part of your correspondent's remarks that I intended particularly to notice. That the writer does not speak from personal experience I think is evident, or she would not say that "rouge can be employed, without injury, to brighten a lady's complexion."

Every school girl knows that even the common carmine in her paint box, if put on the cheeks with water, can be washed off without leaving a permanent mark. I have been much in fashionable French society where the use of rouge was not only considered unblameworthy, but in certain cases openly vindicated: yet its deleterious effects upon the skin were undoubted, and openly lamented, as producing a sallow stain, which, as it cannot be removed by ordinary means, makes a continuance of the bad practice seem necessary. And a bad practice it is, in sober sadness, for any woman; but for women living in this bright, beautiful country—for the wives and daughters of American farmers, *even to think* of using rouge and pearl powder, would be ridiculous, could it be contemplated in any other light than as a degradation? They, too, who enjoy the glorious privilege, not to be too highly prized, of living in the pure, health-giving breath of heaven,—who are at liberty to exercise daily on horseback, and roam at will over hills and fields. I will not think so badly of them as to suppose that they would condescend to tolerate the use of such miscalled beautifiers. It is true, a pale cheek is not esteemed so lovely as one tinged with

"Celestial rosy red, love's proper hue,"

nor is a dark, or coarse skin thought so desirable as one fairer and more delicate; but does not every one know instances among their friends, of faces by nature ugly, to which intelligence, benevolence, and good temper impart the characters of real, soul-like beauty? Believe me, God's handiwork cannot be improved. And the admiration of strangers is dearly purchased by the loss of the respect of those in whose eyes and hearts alone it should be their ambition to appear to advantage; for the mistaken ones, who resort to these paltry arts, do not deck their faces with rouge and pearl powder, to make themselves more *loveable* to their husbands and brothers. It is not put on when they alone are to see them. No—any garb, any faded looks will do for the beings who ought to make their hearts happiness; with whom they are to pass their lives. For whom, then, it may be asked, are they willing to take so much trouble? They who know from experience, may answer.

All substances, without a single exception, that are, or can be used to "impart a delicate white tint to the complexion," *are decidedly injurious;* marring what they are intended to mend.

The "metalic compounds" are justly said to be poisonous, and the effect, even when sparingly used, is to make the skin look parched and glazed. Magnesia, being a mineral substance, is not much less hurtful; and powdered starch, though the least objectionable of any, is seriously injurious by the mechanical action of closing the pores of the skin, preventing the escape of the insensible perspiration which would keep it clear and moist, and finally producing a sickly, unnatural thickness that makes a fair girl, who would otherwise be pretty, look like Jersey veal, bled slowly to death by the butcher! and a brunette more like a piece of old parchment than a lovely young daughter of Eve. Of such an one, in a neighboring city, I heard a physician remark that this disagreeable appearance, being only skin deep, could easily be removed by the application of a vegetable blister!

But I must close this, already-too-long notice; though something might be said of the pangs of wounded vanity that these short-sighted fair ones would suffer if

"Some power the gift would give them
To see themselves as others see them;"

when a warm day, or a little over exertion, by producing a free perspiration throws off the *beautifiers*, leaving the white in disclosed streaks, and the red in unsightly blotches, to the mortification of their friends, and the badly-disguised amazement of the very persons they wished to charm. American women should be ashamed to appear under "false colors."

It has often been asked why the women of England have better complexions, and more healthful looks than those of the United States. The humidity of the climate is doubtless one cause of the greater, and more lasting delicacy of the skin; but the bright bloom of their cheeks is the effect of regular, systematic exercise. English ladies of even the highest rank, wear thick leather shoes, and walk every day six or eight miles without regard to the weather, and with no other object than the preservation of health.

I will close with the assurance, affectionately urged upon all who may have had patience to read thus far, that early rising, cold-water bathing, and daily exercise in the open air, as they promote health and cheerfulness, are the only cosmetics an American woman should dare employ. E. S.

Eutawah, January 5th, 1848.

Boys' Department.

TECHNICAL WORDS A DETRIMENT TO AGRICULTURAL SCIENCE.

Soon after receiving the Agriculturist for November, 1847, my eldest son, an inquisitive lad in his seventeenth year, came to me with the following complaint:—"I wish the printers of papers wouldn't use so many hard words that nobody but doctors and professors can understand. Here's an article in the Agriculturist on the 'Effects of Azotized Manures,' by the use of which it is stated, that grain, grass, and turnips will grow to double their ordinary size, and by which many poor, sandy soils can be made rich. Now if this be true, I should like to know what this manure is, where and how it is obtained, and of what substances it is composed."

I bid him look in the works of Chaptal, Liebig, and Johnson, under the head of "Azote," where he would probably find the manure in question described. The disheartened boy replied that he had searched all these works, and had read all about azote, but at every few lines he had been "bamboozled by some bog-like phrase, or hard-mouthed, crack-jawed word, which would puzzle Noah Webster himself to understand."

Now, Mr. Editor, I will admit that technicalities are very proper in some cases, as, for instance, the Latin names of animals and plants, in works treating on Natural History: for, in order to avoid confusion, it is necessary that there should be a universal language in which to express these names, in a manner to be understood by all civilized nations of the globe; but the abstruse, no-meaning terms, or bastard words, half Greek, half Latin, with which many works are filled, appear to me to be a stumbling block in the road to knowledge, and are unworthy of the age in which we live. Perspicuity, in works of science, is as essential as in those of general literature; and it may truly be said, that the progress of discovery teaches us that the sublimest phenomena are dependent on the most simple principles, so that we may be assured that there is no truth in nature which may not be communicated in language so plain and intelligible that it can be comprehended by all.

I would suggest, therefore, Mr. Editor, that you or some other one, well acquainted with the subject, would write a series of articles for the Boys' Department on "Agricultural Chemistry," expressed in popular language, with such explanations or illustrations that they may be clearly understood by the most ordinary capacity, who will give them a careful perusal. G.

Hartford, Ct., January 28th, 1848.

The suggestion of our correspondent, we think a good one. We can readily conceive the perplexing situation in which one is placed, with an array of hard words before him, the meaning of which he cannot understand. We do not fully agree with our friend, however, in supposing that any of the natural sciences or their collateral branches, can be properly treated of without the use of technical language to some extent. For we contend that there is nothing in nature, whether material or immaterial, organic, or inorganic—whether dead or alive, or exists in fire, air, earth, or water, but necessarily, must have a name, and requires appropriate, though simple language to describe its properties, actions, and manner of being acted upon.

How, for instance, are we to express ourselves when we wish to speak of any of the 55 simple substances, forming, according to the present state of our knowledge, the elements of the whole mass of the material creation? Among these, there are

Five gases, or vapors, namely, *oxygen*, *hydrogen*, *nitrogen* or *azote*, *chlorine*, and *fluorine*.

Eight non-metallic solids and fluids—*sulphur*, *phosphorus*, *selenium*, *iodine*, *bromine*, *boron*, *carbon*, and *silicon*.

Three metallic bases of the alkalies—*potassium*, *sodium*, and *lithium*.

Four metallic bases of the alkaline earths—*barium*, *strontium*, *calcium*, and *magnesium*.

Five metallic bases of the earths—*aluminum*, *yttrium*, *glucinum*, *zirconium*, and *thorium*.

And thirty metals, such as gold, silver, iron, copper, lead, tin, zinc, platinum, and others, the names of which it is unnecessary here to repeat, as, with the exception of those enumerated above, they are not of much importance in the common concerns of life.

We wish that some practical agriculturist, or chemist, who well understands the subject, would furnish our youthful readers with a series of articles, as proposed by our friend above. We see no reason why it cannot be done, if the young tyros will well act their part, and turn to their dictionaries whenever they meet with a word, the meaning of which they cannot comprehend.

A Lesson for the Boys.—Seven classes of company all boys should avoid:—1. Those who ridicule their parents and disobey their commands. 2. Those who profane the Sabbath, or scoff at religion. 3. Those who use profane or filthy language. 4. Those who are unfaithful, play truant, and waste their time in idleness. 5. Those who are of quarrelsome temper and apt to get into difficulty with others. 6. Those who are addicted to lying and stealing. 7. Those who are of a cruel disposition; who take pleasure in torturing and maiming animals and insects, and robbing birds of their young.—*Exchange Paper.*

FOREIGN AGRICULTURAL NEWS.

By the arrival of the English steamers we are in receipt of our foreign journals up to the 22d of January.

MARKETS.—*Ashes* in good demand. *Cotton* a decline of ⅛d. per lb. *Flour & Grain* in fair request at a very slight advance. *Naval Stores* brisk. *Provisions* no change.

Money very abundant, good paper could be discounted at 3 to 4 per cent.

Caution in Applying Salt to Fruit Trees.—Common salt may be scattered on the surface of the ground at the rate of 300 lbs. per acre, with perfect safety, so far as vegetables are concerned; but it is a dangerous substance to apply to fruit trees.—*Gard. Chronicle.*

Grafting Vines.—The best time to graft the grape vine is not when the sap begins to rise, for this is of all periods the most improper. Let the vines break into leaf, and then you may graft either on the old or young wood with every chance of success.—*Ibid.*

How to Prevent the Burning of Chimneys.—Fires in chimneys in France have recently been prevented by placing three frames of wire work one foot above each other, near the base of the chimney; no flame will pass them.

Human Bones Used as Manure.—Millions of human bones, mixed with those of horses, mules, &c., collected at Leipsic, Austerlitz, Jena, Waterloo, and other battle fields, have been imported into Hull, from the continent, and, after being ground to dust, used to manure the fields of Yorkshire. So much for glory!

Fresh Manure not Good for the Vine.—In all wine countries, where we may suppose the culture of the vine to be best understood, the opinion universally prevails that fresh manure ought not to be used, or if it be so, that it should be applied in the autumn after the vintage, so as to be in a great measure decomposed, and incorporated with the soil before the ascent of the sap in the spring. This practice is occasionally followed in the Rhinegau, where a strong prepossession exists in favor of manuring the vineyards, and where small quantities of litter are spread around the roots of the vines; but the best authors concur in recommending that all the manure employed should be first duly fermented, at whatever time it may be used.

The vine dressers of France generally object to manure altogether. The poet Virgil, however, recommends it in some lines which should be committed to memory by all who grow the vine:—

> "Next; when you layers in your vineyard make,
> Mix some rich dung, and shells and pebbles break,
> Spread the good soil with lib'ral hand around,
> And trench them deeply in the lighten'd ground;
> Superfluous moisture thus glides through the earth,
> And healthy vapors aid the tender birth."

These are wise maxims, and no modern discovery is at variance with them.

East India Guano.—At a late meeting of the Highland Society at Edinburgh, Professor Low presented to the meeting three specimens of guano from Malacca and the neighboring islands. The first specimen, No. 1, consisted of the excrements of the larger frugivorous bats, which frequent in enormous numbers the rocky caverns of the coasts. It is regarded by the natives as inferior, for the purposes of manure, to the other kinds. No. 2, consisted chiefly of the excrements of the smaller bats which feed on insects, and is mixed with the former in the same caverns. It is greatly more valued than the first kind for the purposes of manure. No. 3, consisted chiefly of the dung of insectivorous birds, apparently of the swallow kinds, and is more valued by the natives than any of the others. The Professor mentioned that these substances have been employed as manure by the Chinese and other inhabitants of the countries which produce them, from the remotest times. They are used for any kind of plants, but the most common application of them is to the rice, or paddy fields. A hole being made in the ground, a small quantity of the guano is deposited, and then the seeds. It is of practical importance that the distinction between the different kinds should be known to the importers of eastern guano. The first kind only, namely, that of the larger bats, has as yet been brought in quantity into England; and having been found inferior to the guano of the Peruvian and African coasts, the eastern guanos have been regarded as of inferior quality, and the importation had accordingly been discontinued. But the second and third kinds will probably be found not inferior to the sorts now in use, and may be procured, especially the second kind, or that of the insectivorous bats, in most abundance from the coasts of Malacca, Cochin-China, and several of the islands of the Eastern Archipelago.

Subsoiling.—Mr. Pusey, in a paper read before the English Agricultural Society, gives the following interesting account of the mode adopted, in the Flemish husbandry, of bringing up the subsoil, and gradually deepening the staple:—They dig trenches, about a foot deep, over the field, from the bottom of which, assuming the soil to be 10 inches deep, they have therfore dug up two inches of subsoil, and as they proceed they fling the whole over each land, on which the seed has been previously sown, which they thus cover. The trench being shifted sideways each year, and the same process renewed, at the end of a certain number of years, two inches of the whole subsoil will have been mixed with the upper surface, and the soil deepened by that amount. The same process is then repeated, two inches deeper. In this way, after four or five courses of trenching, the soil is brought to a depth of 18 or 20 inches of uniform quality.—*Journ. Royal Ag. Society.*

Manure for Wheat.—Mr. Way, consulting chemist of the Royal Agricultural Society of England, has analysed about fifty specimens of different sorts of wheat, and has come to the conclusion that an average crop of wheat takes out of the land the following inorganic substances:—

84 lbs. of silica	6 lbs. of magnesia
20 lbs. of phosphoric acid	1 lb. of peroxide of iron
4 lbs. of sulphuric acid	23 lbs. of potash
8 lbs. of lime	1½ lb. of soda.

It will be seen that the most important ingredients of wheat are phosphoric acid, and the alkalies, potash and soda. If these were returned to the land in sufficient quantity, the minor mineral ingredients, such as silica, lime, magnesia, iron, &c., would in the greater number of cases be supplied by the soil. The phosphoric acid would be most conveniently returned in bone dust, which contains from 50 to 60 per cent. of the phosphates. The alkalies might be supplied singly in the shape of nitrate of soda or nitrate of potash (saltpetre). Guano is valuable, inasmuch as it comprises not only a large proportion of phosphates and alkalies, but also what is of great importance, particularly to the young plant, a considerable portion of ammonia. The principal organic substances he found to be carbonic acid and nitrogen, both of which exists in the air; but it is from the ammonia of decaying animal and vegetable substances that plants derive their principal supply of nitrogen, ammonia being composed of nitrogen and hydrogen. When a plant is burned, the organic portions fly off into the air, whilst the ashes comprise the mineral or inorganic ingredients. Ammonia was essential to the growth of wheat, and his might be supplied to lands which abound in all the mineral ingredients, in the shape of sulphate of ammonia, which might be manufactured from the liquor obtained from the gas works of every town.—*Ibid.*

Editor's Table.

THE POTATO DISEASE.—We are constantly receiving communications on the cause and remedy of the inexplicable disease of the potato, often contradictory in themselves, *few, if any of which, are without exceptions.* By one class, the cause of the malady is attributed to parasitical fungi; by another, to insects or worms; a third, to exhausted vitality from long cultivation; a fourth, to an improper use of ammoniacal or stimulating manures; a fifth, to the want of lime in the manure or soil; a sixth, to drought; a seventh, to a superabundance of rain; an eighth, to a deficiency of electricity in the atmosphere; a ninth, to an excess of electricity; and by a tenth class to a miasmatic or some unknown agency, the mode of action of which, it is beyond human perception to comprehend.

Among the numerous remedies which have been recommended, those that seem most to merit attention, are, the production of new varieties from seed; early planting, followed by early harvesting, and securing the crop from wet and frost; and lastly, what we suggested in our fourth volume, three years ago; namely, *plant on moderately rich, warm land, having a good sod, with no manure but plaster, charcoal dust, wood ashes, salt, or air-slacked lime.*

CROPS OF THE U. STATES IN 1847.—A Washington correspondent of the N. Y. Courier & Enquirer gives the following particulars from the forth-coming Annual Report of the Commissioner of Patents:—

	Bushels.
Indian corn,	510,000,000
Oats,	111,530,000
Rye,	31,350,000
Wheat,	177,000,000
Buckwheat,	11,674,000
Barley,	5,735,000
Potatoes,	97,018,000
Tobacco,	219,964,000 lbs.
Cotton,	1,026,500,000 "
Rice,	103,400,500 "
Silk (cocoons),	404,600 "

GREAT YIELD OF WISCONSAN WHEAT.—Mr. B. B. Reynolds has just completed the cleaning up of ten acres of wheat raised in this town the past season. He has 450½ bushels—a trifle over 45 bushels to the acre. For some nights previously to its being threshed, fifteen or twenty hogs had access to the wheat; and Mr. R. is of the opinion, that, had it not been for this, the yield would have averaged 50 bushels per acre. The wheat was of the bearded, red-chaff variety.—*Watertown Chronicle.*

LEGAL BUSHEL OF GRAIN AND SEEDS IN OHIO.—The following is a copy of an act passed by the Ohio Legislature, in February, 1847, fixing the bushel weight of the leading kinds of grain in that state:—

Sec. 1. *Be it enacted, &c.* That, whenever wheat, rye, flax seed, Indian corn, barley, clover seed, or oats, shall be sold by the bushel, and no special agreement as to the measurement shall be made by the parties, the bushel shall consist of sixty pounds of wheat, of fifty-six pounds of rye, or flax seed, of fifty-six pounds of Indian corn, of forty-eight pounds of barley, of sixty-four pounds of clover seed, and thirty-two pounds of oats.

Sec 2. All laws and parts of laws inconsistent with this act are hereby repealed.

CULTIVATION AND MANUFACTURE OF PEPPERMINT.—A correspondent of the Syracuse Journal states that there is more peppermint manufactured in Wayne county, N. Y., than in all other parts of the United States put together. He says that a company from New York have purchased the manufacturing establishments at Palmyra, with all the mint now growing, for which they have paid $200,000, binding those who have been engaged in the business, not to grow any more mint nor manufacture the oil for a certain number of years.

CHOICE VARIETIES OF APPLES FOR OHIO.—In the late Transactions of the Ohio Nurserymen and Fruit Growers' Convention, held at Columbus, in September last, Mr. E. Nichols, of Walhonding, recommends the following fifteen varieties of apples as adapted for the county of Belmont:—

Early.—Summer Queen; Early Pennock.

Fall.—Patterson's Spice; Angle Sweet.

Late Fall.—Fall Pippin; Rambo.

Winter.—Redstreak or Wells; Golden Russet; Belle Fleur; Spitzenburg (of Belmont); Roman Stem or Rawls' Jannett; Willow or Willow-twig; Roxbury Russet; Polly Bright.

The above-named varieties, in Belmont, he states, furnish fine apples for every day in the year, without extraordinary care. "I have eaten the Queen and the Neverfail," says he, "each of perfect flavor, on the same day; the first from the tree, the last from the cave of a neighboring tenant farmer, put up in the most careless manner; and I must testify, too, that the Neverfail, in flavor, seemed more than a match for the Queen, although one year older. The Willow is perhaps a better keeper than the Neverfail; and, as a cooking apple, is first rate."

OREGON EXPORTS.—We see by the Oregon Spectator, that 1,736 barrels flour, 191,000 feet of lumber, and 96,000 shingles, were exported from that young territory in the month of April last. The Spectator anticipates, that the coming season, there will be exported 10,000 barrels of flour!

CULTIVATION OF THE GRAPE.—We understand from Mr. George Woodward, of Port Chester, N. Y., that the unsurpassably fine Isabella grapes, three inches in circumference, alluded to at p. 356, in our sixth volume, as exhibited at the Fair of the Brooklyn Institute, in September last, were raised strictly in accordance with the rules laid down by Clement Hoare, in his Treatise on the Vine.

TOBACCO CULTURE IN MASSACHUSETTS.—The editor of the Springfield Republican says, that the cultivation of the tobacco plant has been very largely entered into in that vicinity, within a year or two past. One gentleman of that town (Springfield), had twenty-six acres of it last season. When successfully cured, it proves a very profitable crop, but its cultivation requires much care, and exhausts the soil in a large degree.

A FEMALE FARMER.—The second premium for the best cultivated farm in Litchfield Co., Ct., was awarded the past season to Mrs. Vesta Hawkins, of Watertown.

The farm contains 160 acres. It has been under her management for the last ten years. The committee of examination say: "It is divided the present season into 23 acres of meadow, three and one half corn, six of oats, one and a half of rye, two of buckwheat, a half acre of potatoes, seven acres of woodland, and the residue of pasture land." The produce of the farm for the past season is estimated as follows:—50 tons of hay, 200 bushels of corn, 133 shocks of oats, and 150 bushels of potatoes. The stock kept on it last season consisted of 26 head, including six calves, two horses, and 56 sheep. This farm is conveniently laid out in small fields, the fences mostly of rails, all in good repair, and with the buildings, presents a neat and tidy appearance.—*Ex. Paper.*

POISON FROM LEADEN WATER PIPES.—It is stated in the Christian Citizen that several persons of Worcester, Mass., have suffered during the past year from the use of water pumped from wells through leaden pipes. One individual has entirely lost the use of his hands

REVIEW OF THE MARKET.

PRICES CURRENT IN NEW YORK, FEBRUARY 15, 1848.

ASHES, Pots,	per 100 lbs.	$5 88	to	$6 00
Pearls,	do.	8 25	"	8 31
BALE ROPE,	lb.	6	"	8
BARK, Quercitron,	ton,	35 00	"	38 00
BEANS, White,	bush.	75	"	1 38
BEESWAX, Am. Yellow,	lb.	22	"	25
BOLT ROPE,	do.	11	"	12½
BONES, ground,	bush.	45	"	55
BRISTLES, American,	lb.	25	"	65
BUTTER, Table,	do.	15	"	25
Shipping,	do.	9	"	15
CANDLES, Mould, Tallow,	do.	12	"	14
Sperm,	do.	25	"	38
Stearic,	do.	20	"	25
CHEESE,	do.	5	"	10
COAL, Anthracite,	2000 lbs.	5 00	"	6 00
CORDAGE, American,	lb.	11	"	13
COTTON,	do.	6	"	10
COTTON BAGGING, Amer. hemp,	yard,	15	"	16
FEATHERS,	lb.	30	"	40
FLAX, American,	do.	7½	"	9
FLOUR, Northern and Western,	bbl.	5 88	"	6 38
Fancy,	do.	6 50	"	7 00
Southern,	do.	5 88	"	6 25
Richmond City Mills,	do.	7 44	"	7 50
Buckwheat,	do.	—	"	—
Rye,	do.	4 12	"	4 25
GRAIN—Wheat, Western,	bush.	1 10	"	1 35
Southern	do.	1 00	"	1 15
Rye,	do.	85	"	90
Corn, Northern,	do.	60	"	65
Southern,	do.	58	"	60
Barley,	do.	78	"	85
Oats, Northern,	do.	48	"	50
Southern,	do.	40	"	45
GUANO,	do.	2 50	"	3 00
HAY, in bales,	100 lbs	70	"	75
HEMP, Russia, clean,	ton.	225 00	"	235 00
American, water-rotted,	do.	160 00	"	220 00
American, dew-rotted,	do.	140 00	"	200 00
HIDES, Dry Southern,	do.	7	"	9
HOPS,	lb.	5	"	8
HORNS,	100.	2 00	"	10 00
LEAD, pig,	do.	4 25	"	4 50
Sheet and bar,	lb.	4½	"	5½
MEAL, Corn,	bbl.	2 75	"	3 00
Corn,	hhd.	14 50	"	15 00
MOLASSES, New Orleans,	gal.	28	"	30
MUSTARD, American,	lb.	16	"	31
NAVAL STORES—Tar,	bbl.	2 00	"	2 25
Pitch,	do	81	"	1 00
Rosin,	do.	60	"	75
Turpentine,	do.	2 50	"	2 88
Spirits Turpentine, Southern,	gal.	37	"	40
OIL, Linseed, American,	do.	63	"	66
Castor,	do.	1 20	"	1 25
Lard,	do.	80	"	85
OIL CAKE,	100 lbs.	1 25	"	1 50
PEAS, Field,	bush.	1 00	"	1 25
PLASTER OF PARIS,	ton.	2 25	"	3 00
Ground, in bbls.,	of 300 lbs.	1 12	"	1 25
PROVISIONS—Beef, Mess,	bbl.	8 25	"	12 00
Prime,	do.	5 25	"	7 50
Smoked,	lb.	7	"	11
Rounds, in pickle,	do.	5	"	7
Pork, Mess,	bbl.	9 75	"	12 00
Prime,	do.	6 50	"	9 00
Lard,	lb.	7	"	9
Bacon sides, Smoked,	do.	6	"	8
In pickle,	do.	5	"	7
Hams, Smoked,	do.	8	"	13
Pickled,	do.	6	"	10
Shoulders, Smoked,	do.	6	"	9
Pickled,	do.	5	"	7
RICE,	100 lbs.	3 00	"	4 00
SALT,	sack,	1 45	"	1 55
Common,	bush.	20	"	35
SEEDS—Clover,	lb.	5	"	8
Timothy,	bush.	1 75	"	3 50
Flax, clean	do.	1 40	"	1 45
rough,	do.	1 30	"	1 35
SODA, Ash, cont'g 80 per cent. soda,	lb.	3	"	3
Sulphate Soda, ground,	do.	1	"	—
SUGAR, New Orleans,	do.	4	"	7
SUMAC, American,	ton,	35 00	"	37 00
TALLOW,	lb.	8	"	9
TOBACCO,	do.	2½	"	8
WHISKEY, American,	gal.	25	"	26
WOOLS, Saxony,	lb.	35	"	60
Merino,	do.	30	"	35
Half blood	do.	20	"	25
Common do		18	"	20

REMARKS.—In Grain, Flour, Beef, and Pork, there has been a decline in price since our last; and we are of opinion that this will gradually continue till the canals open. The farmers will do well to sell their produce now as fast as convenient. Hay, a slight advance. Very little change in other articles.

Money is more abundant.

The Weather thus far has been unprecedentedly mild, and we are looking for an early spring.

TO CORRESPONDENTS.—Communications have been received from Solon Robinson, Eli N. Bradley, R. L. Allen, Aaron H. Palmer, W. G. B., H. Fuller, N. Longworth, A Friend, R. K. Tuttle, J. S., Sergeant Teltrue, A Plain Farmer, F. R. S., Wm. Whedden, Fairfax, J. V. B. Roome, and M. W. Philips.

J. P., of Tallahasse, Florida, is referred to p. 205, vol. ii.; p. 355, vol. iii.; and p. 163, vol. iv., of the Agriculturist, for information on the manufacture of sugar; also, to Professor McCulloh's Report to the Secretary of the Treasury, published in the Congressional Documents of last year.

ACKNOWLEDGMENTS.—Transactions of the Worcester (Mass.) County Agricultural Society for the year 1847; Transactions of the Ohio Nurserymen and Fruit Growers' Convention, held at Columbus, in September, 1847; Davis' Text Book on Agriculture, from Samuel S. and William Wood; and Simpson on Chloroform.

THE CAST-IRON PLOW.—We intend to give a brief history of the invention and improvement of this implement in our next.

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